Daryl Gregory: Gardening at Night

Fantasy & Science Fiction

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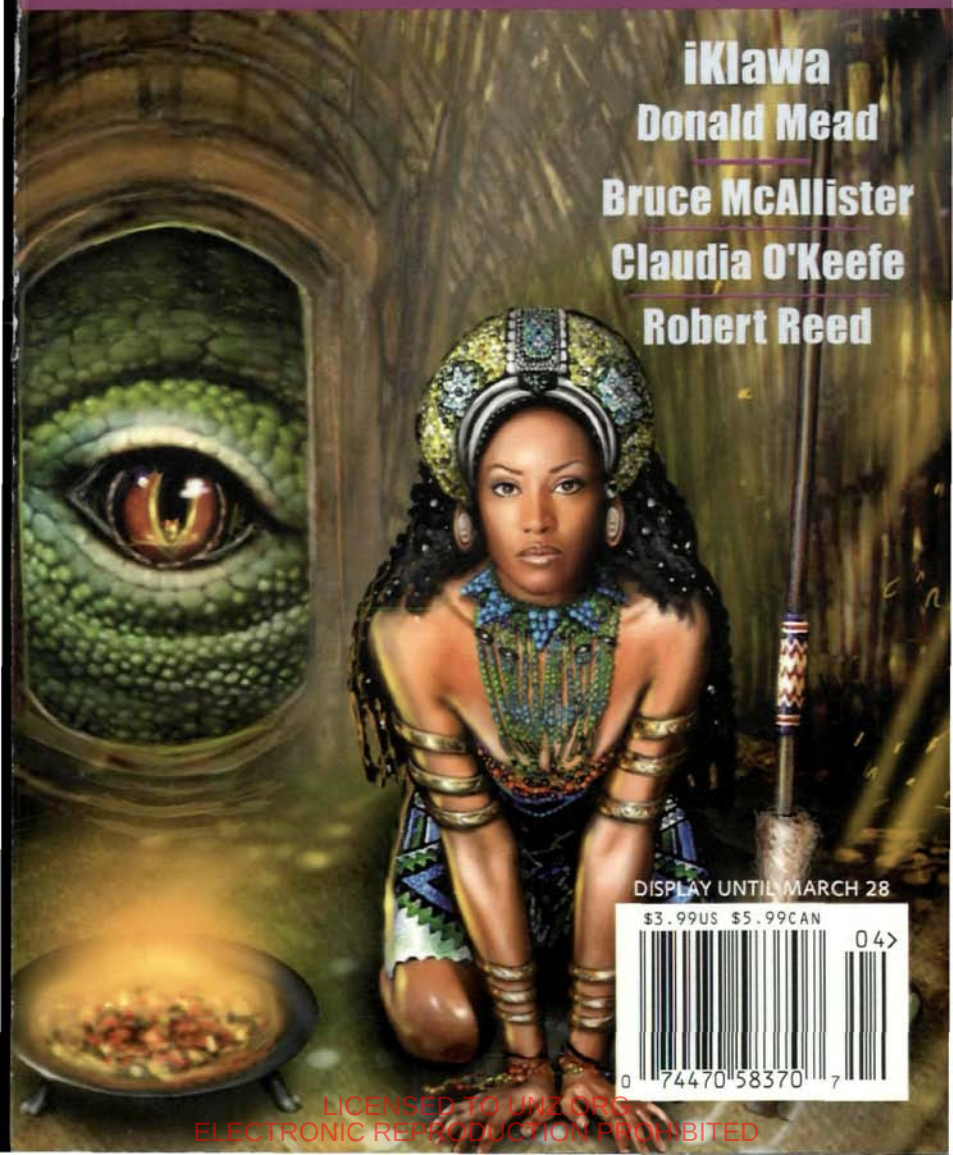

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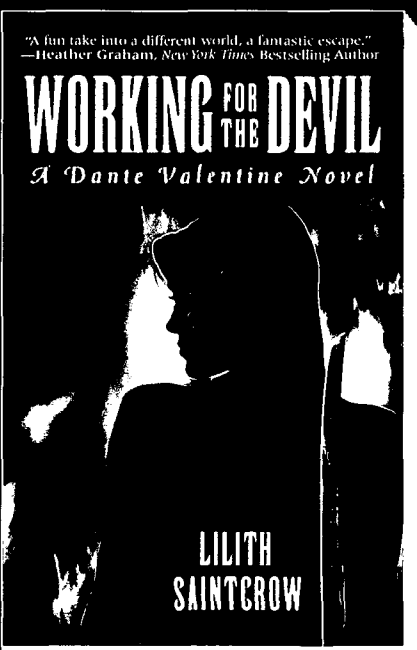
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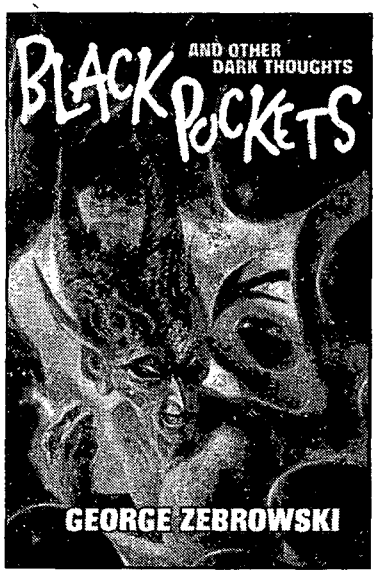

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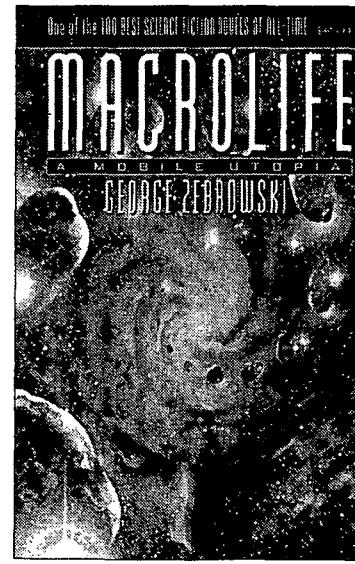

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The Magazine of Fantasy & Science Fiction (ISSN 1095-8258), Volume 110, No. 4, Whole No. 649, April 2006. Published monthly except for a combined October/November issue by Spilogale, Inc. at $3.99 per copy. Annual subscription $44.89; $54.89 outside of the U.S. Postmaster: send form 3579 to Fantasy & Science Fiction, PO Box 3447, Hoboken, NJ 07030. Publication office, PO Box 3447, Hoboken, NJ 07030. Periodical postage paid at Hoboken, NJ 07030, and at additional mailing offices. Printed in U.S.A.
Copyright © 2006 by Spilogale, Inc. All rights reserved.
Distributed by Curtis Circulation Co., 730 River Rd. New Milford, NJ 07646.
GENERAL AND EDITORIAL OFFICE: PO BOX 3447, HOBOKEN, NJ 07030
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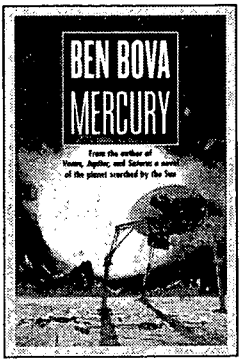

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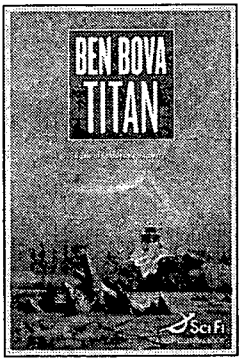

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Daryl Gregory's previous contributions to F&SF *include "The Continuing Adventures of Rocket Boy" and "Free, and Clear" (or, as everyone seems to call it, "The Allergy Story"). He lives with his family in State College, Pennsylvania, where he is busy working on a novel entitled* Pandemonium.

Recently, a fellow named John Boston casually tossed off the term "lab opera" to complement "space opera." This new story might fall into the newly-minted category, but whatever you care to call it, it's good reading. (By the way, is this our second story to borrow a song title from the group REM, or are there more?)

Gardening at Night

By Daryl Gregory

THE MINEFIELD WAS A TIDY two-hundred-foot square out on the salt flats, its border marked by a yellow ribbon staked to the sandy surface. Anti-personnel landmines were scattered in a pseudo-random pattern inside, buried an inch deep. All the mytes had to do was find all the mines without exploding them. All Reg had to do was act like he was in control.

He sat on a Rubber-Maid trunk full of tools, cables, and robot parts, in an attitude of prayer: elbows on knees, bent over a paper coffee cup between his palms. One of the grad students wheeled the dolly to the edge of the field, crossed carefully over the ribbon, and stopped about ten feet inside the border. He levered his cargo — a glossy black slab the size of a gravestone — onto the ground. Another student ran an orange extension cord out to the slab; the other end was wired to a battery pack set up outside the border. Then the four students took up positions around the square, booted up laptops and video cameras, and one by one turned their attention to Dr. Reg Berentz.

This should be Eli's job, Reg thought. Eli was the project leader, the

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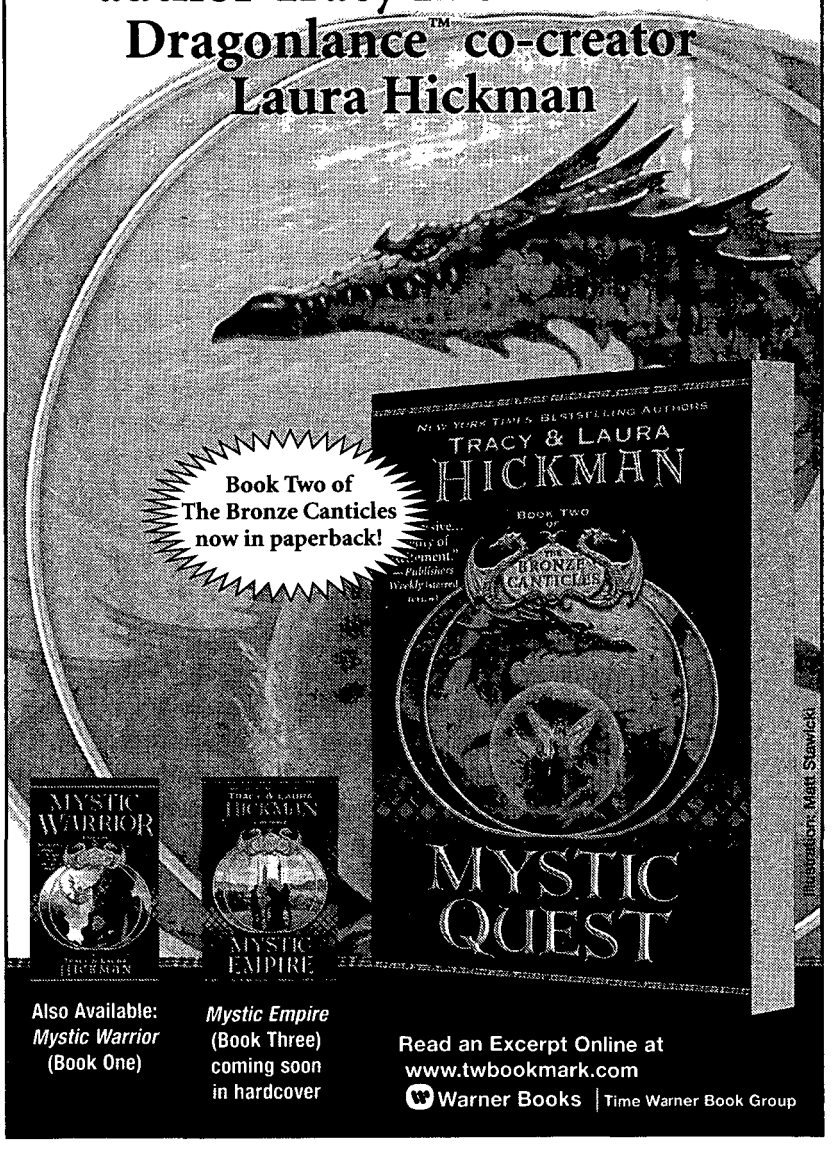

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great man, the field marshal. Reg had been working on this project with him for more than four years, but months into Eli's hospitalization it still felt presumptuous to decant the mytes without him. The old man loved them like his children.

Reg set his coffee on the ground and stood up, back creaking. He was only thirty-three, an assistant professor and less than half Eli's age, but he felt ancient compared to these twenty-something students. He'd been up most of the night debugging code, and he felt as keyed up and sleep-deprived as he had the first weeks after his son was born.

He walked slowly to the border, stepped over the tape, and squatted down next to the slab. Up close it looked like a stack of black Legos — rectangles stacked on rectangles — almost three feet high and four inches thick. One thousand, one hundred and fifty shells. He traced a finger up the right edge of the block, got a fingernail under the top piece, and tapped it, tilting it up. The piece was shaped like a domino, two inches long and a little less than an inch wide, the back end still connected to the next piece in the chain. Two wires protruded from the front like long antennae; four other wires dangled from the bottom.

Reg dipped into his pocket, found the special AC adapter, and fitted it to the antennae. The other end of the adapter was the standard three-prong pig face: two squinty eyes and a round snout in the middle. "This little piggy went to market," he said to himself. He reached down and picked up the female end of the extension cord.

Dipti, one of the veteran students who'd been on the project almost as long as Reg, said, "Wait a minute, Dr. B. Aren't you going to say it?"

The students looked at Reg expectantly. Eli might be in the hospital, but there were traditions to maintain.

Reg set his face into an Eli frown. "All right, people," he said, doing a practiced imitation of the man. "Let's do this like my sister."

Marshall Lin, a first-year student on his first trip to the minefield, looked to Dipti for an explanation, but she waved it off: *Tell you later.*

Reg kissed the pig face on its nose, braced himself, and connected the adapter to the extension cord.

Nothing happened.

Reg unplugged, plugged again. Stood up, hands on his hips, and looked toward the battery pack. "Can somebody...?"

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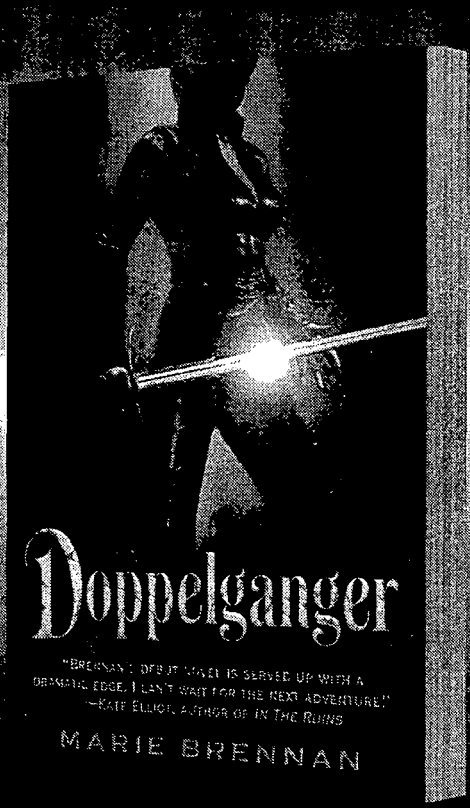
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Before he could finish his sentence, the electricity hit and the slab burst into a multitude of black shapes. Reg jumped back, laughing. Shells spattered onto the ground, tumbled in the dirt, righted themselves, and fled on churning wire legs.

Reg stepped back over the tape on tiptoe, careful to avoid crushing them. Some of the creatures scurried toward him, then stopped short a few inches from the tape and reversed course. The rest flowed outward, toward the center of the field. It looked for a moment as if they were scattering, each individual fleeing for shelter, and Reg sucked in his breath. They'd all die, triggering the landmines blindly.

But then their instincts kicked in and they turned in toward each other. Shells called out on the universal myte frequency, skittered toward each other, and butted heads, antennae waving. They crawled over each others' backs, thrust wires into receiving ports, tumbled like puppies.

Sometimes when they touched they remained in contact. Bodies began to assemble.

Reg watched the mass of shells closest to him. Ten of the shells had already daisy-chained into a rough circle. Another strand formed at the other side of the circle, writhing frantically like a game of crack the whip. In a moment the segment slapped across the center of the circle; when it rapped against the other strand, the two chains curled inward and joined at an angle. The two strands worked like together, swinging into other shells. Clusters formed at the intersection of the limbs. The pace accelerated, a flurry of attachment and reattachment as the group struggled to implement the shared blueprint in their memory.

In ten seconds, assembly was complete. He knew from studying it in the Logosphere, the simulation environment they used, that the myte's body was composed of thirty-seven shells. It was shaped like a squat "Y" — two long limbs, one short — connected at the middle by a cluster of shells. The short limb, capped by a cube of six shells, swiveled and swayed like an elephant's trunk. It was a new design, lighter than the sixty-shell mytes in the last generation they'd tested on the flats, less likely to set off mines with its weight. He shook his head with delight. By his own definition the creature in front of him was no more *real* or *alive* than a creature instantiated in the Logosphere — but it didn't feel that way.

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There was something about seeing it born in front of his eyes, out here in the sand and sun. It seemed to demand a name.

All around the new myte, its sisters were assembling, thirty or forty of them already up and mobile. The remaining shells, spread out over a twenty-yard area, would take longer to find partners, if they found them at all.

The assembled mytes went to work, crawling delicately over the sand and rock like crabs. Every six inches or so, the myte would stop, balance on its two rear legs, and wave its trunk over the ground in front of it like a divining rod, using simple beat frequency oscillation to sniff for metal. And not just any metal: the myte had evolved to concentrate on certain magnetic signatures and ignore the noise of shrapnel, bullet casings, and mundane garbage.

"Score one," Dipti called. She was on the east side of the square, eyeing the screen of her laptop. "C5, and no detonation," she said. Reg was standing near the C hash mark on the yellow ribbon, and looked up to where 5 ought to be on the Y axis. A live-action game of *Battleship*.

The myte in question squatted over a section of dirt, trembling with an excellent imitation of excitement. Its foreleg scratched a circle around the found mine.

"Okay," Reg said, uselessly. He started pacing. "Okay."

Over the next thirty minutes, the mytes found another dozen mines without setting them off — ten minutes ahead of their best real-world record. He began to fantasize about clearing the field in less than an hour. Eli would be happy, and more importantly, they'd have something solid to write about in the next grant application. The whole project was on soft money, and Reg and Eli had been shaped by evolutionary pressures to pursue grants with the single-mindedness of anteaters. Or mytes.

Reg grew more nervous as each mine was uncovered, and finally his pessimism was validated: mytes started piling up in the northwest quadrant, something they'd never done in the Logosphere. They crowded into each other, hemmed in by the yellow corner. They seemed to have forgotten about the mines — only the tape kept them from heading to Alaska.

The tape in and of itself was no barrier, but the wire inside it emitted a low-power radio broadcast. The frequency and the message were hard-wired

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into every myte — the only preset commands in the chipset. God whispered, and the message was Death. Any myte who crossed the wire would shut itself off automatically.

Already, the crowding had pushed some of the mytes into the tape and they'd become dead weight. The rest of the mytes piled on and died in turn.

"Jesus Christ, it's a frickin' Who concert!" Reg said. He didn't think any of the students were old enough to get a classical reference, but Dipti laughed. Marshall Lin looked as confused as before.

A few more minutes and every myte on the field had converged on the northwest corner, and Reg called the test to a halt. Dipti stalked into the field, waving an antenna wired to a radio and battery pack — the same frequency and message as the tape, but with more power. One by one the mytes went dead.

"Round 'em up," Reg said. "Let's set up another block." He walked back to the truck and poured himself another cup of coffee.

"The same thing every time?" Eli said, ignoring the nurse walking into the room.

Reg shrugged. "Three different quadrants, but yeah — they were running for the fence. Looks like it's time to take your medicine."

The nurse, a big white guy, set the tray on the side table. Like Eli and Reg, he wore a paper breather over his mouth and nose, which made him even more intimidating. Eli still hadn't looked at him.

"It's got to be in the environment code," Eli said. He always thought it was in the environment code, never in the myte processing software. Reg's grad assistants had written the environmental library.

"Dr. Karchner...," the nurse said. His surprisingly soft voice was almost lost in the hum and hiss of the air scrubbers. Vents in the ceiling sucked air out of the room, blasted it with UV, forced it through microfilters, and jetted it back.

"Maybe it's heliotropism," Eli said. The mytes' skin was light sensitive. "Increase the sunlight in the Logosphere, make sure it's coming from the west. And make sure your sand is reflecting properly."

Reg shook his head. "I don't think that's it," he said good-naturedly. "But I'll — " Behind Eli, the nurse crossed his arms. Beefy Aaron Neville arms. "I'll check it out," Reg said.

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"Dr. Karchner," the nurse said, louder.

Eli sighed, pulled down his mask, and allowed the nurse to hand him, one at a time, three little plastic cups, which he downed like shots of harsh whisky.

The last time Reg had talked to Eli's doctor, the mix was INH, Cycloserine, and Ethioniamide, but he could very well be taking some new cocktail. Months into his treatment, he'd already gone through the first-line drugs, and was working his way down the bench. The sputum counts would dip with each new combination, then climb steadily back up.

Any three TB-tested antibiotics, used consistently, should have been enough to wipe out the TB — unless the strain happened to evolve in a hyper-Darwinian environment like the University of Utah Hospital (Motto: Come for the gall bladder infection, but stay for the multi-drug-resistant TB). Eli, more than anyone, understood the rule of large numbers, the arithmetic of natural selection. It became clear with each failed cocktail that the strain he'd picked up was something of an evolutionary veteran.

Eli's doctors were getting desperate. Most of his treatment had been self-administered at home, but as Eli deteriorated they'd brought him back to the scene of the crime, the same hospital where he'd been infected. It seemed ludicrous to Reg that a rich, fully insured American could die of consumption in the second decade of the twenty-first century...but there it was.

The nurse left, and Eli leaned back into the pillows — the back of his bed was almost always raised — and blinked slowly. He was a wide-faced man with a monkish fringe of gray hair, only in his late-sixties, but he looked older. The energy he'd had five minutes ago seemed to have been knocked out of him. At least he wasn't coughing. Reg couldn't take the coughing.

They called this phase "L & C": Liquefaction and Cavitation. After years of macrophage-bacteria warfare, TB bacilli fled into the lung tissue where the cumbersome macrophages couldn't follow. Smaller T-cells pursued like barracuda, chewing apart healthy tissue to deprive TB of breeding places. Cells turned liquid and were coughed out in shotgun blasts, leaving behind lungs pitted like exploded minefields.

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The coughing was awful, but worse was the way Eli dropped his head and *submitted* to it — and Eli submitted to nothing without a fight.

Reg got up to leave. "I'll let you rest. Tomorrow I'll stop by with — "

"I got in the study," Eli said.

"What? When?"

"Found out this morning." There'd been no new TB drugs for almost fifty years, but with TB raging across AIDS-weakened Africa, a few pharmaceutical companies decided there might be a market for expensive new drugs to replace the cheap generics. Cecrolysin was the first of the new peptide antibiotics okayed for human trials. Eli's doctor had been trying to get him into the study for months.

"Eli, that's great news! When do you start?"

He waved a hand. "A couple weeks." He didn't look happy about it. But maybe that was just the fatigue.

Reg was struck by the fact that Eli had no one else to give this news to. He'd divorced sometime in his thirties. He had no children, and besides Reg, no close friends in the department. Somewhere he must have old friends, ex-colleagues, relatives — maybe even a sister who was indeed "fast, cheap, and out of control" — but Reg had never met them.

He reached for the older man's shoulder, and hesitated. Did Eli dislike being touched? He wasn't the huggy type. Reg finally patted him on the shoulder, dropped his hand to his side. "That's...amazing news. Really amazing."

Perhaps half a minute passed, and Reg couldn't think of anything to say. Eli remained silent and impassive.

"Well," Reg said. "I'll bring by the videos tomorrow, and the stats. You'll be back with us in no time." Reg shouldered his bag.

He reached the door and Eli said, "How are Cora and Theo?"

Reg turned. Eli, asking about his family?

"Fine," Reg said. "Everything's going really well."

When Reg got home he made a circuit of the echoing apartment, flicking on lights. First the living room, empty except for the entertainment center and the loveseat Cora didn't want; the front bathroom, spare and clean; the back bedroom where he slept, and the adjoining master bath. He did this out of habit, even though he lived alone six days of the

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week, even though the apartment was so small there was barely room for anyone to hide.

Last he checked the guest bedroom. The bed was made and the toys were all put away, except for on the window sill, which had become a permanent parking lot of Hot Wheels cars watched over by second-favorite action figures. The first-stringers were two miles away, in Theo's room at the house on the avenues, where he lived with his mother. Where Reg had lived too, until a few months ago.

The house they'd shared was a big Victorian. Reg had always worked late, but once he joined Eli's myte project he started staying until ten or eleven, and when he came home he'd first patrol the downstairs of the old house, then go up to his son's room, where Theo would be in his usual position on the bed: face down, body draped precariously over the edge. He'd lift Theo's arms back onto the bed and tuck the blankets over him. Theo sometimes mumbled something, but never woke completely. Then Reg would go to the bedroom, undress in the dark, and slip under the covers. He'd spoon against Cora, shivering, and nudge his icy feet against hers. "Oh my *God*," she'd say. He'd laugh and slip his arm over her hip to cup her belly and fall asleep breathing into her neck.

Reg flicked off the light, shut the door to save the air conditioning.

In the kitchen he poured himself a bowl of Raisin Bran — one good thing about living alone, he always knew exactly how much cereal he had left — and set it down next to the laptop he kept set up on the bar counter. He opened a search engine and typed "cecrolysin."

THEY CALLED IT the Garden. Former National Guard garage, former warehouse, former abandoned building, then annexed by the University of Utah and converted to a computer lab. A dim, hollowed space, filled with monitors glowing like jack-o'-lanterns.

The building was a barrel cut in half, its ridged roof forty feet above the floor at its highest point. Industrial-sized ductwork for the climate control ran along the tops of the walls. The cement floor was crowded with dozens of metal racks loaded with shiny new pizza box servers, dozens more folding tables loaded with old PCs and dusty routers, and rivers of cable: black power, blue Ethernet, snake-striped fiber optics. Every new

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thing they could afford side by side with every second-hand piece they could scavenge, and all connected. The room generated a steady roar.

Eli stayed in the hospital all that summer, and so Reg was first in the building every morning. After disarming the security system, he took time moving through the maze, checking equipment. His hands roved intimately over the pronged and portholed backsides of the computers, plucking at wires and tugging at connections. The machines hummed accompaniment. This fiddling with the network was his nervous ritual, half superstition, half technical professionalism: you can never be too careful.

The monitors displayed simple line plots and bar graphs that shifted in real time to reflect the status of the 'sphere. He rarely studied the screens directly, but took note of them in passing, like a farmer mindful of clouds. Jobs usually ran all night — virtual resources churning, niches filling and emptying — and by morning entire species had played musical chairs.

Sometimes he reached behind a CPU or router and found a loose jack. As he jiggled it into place he wondered how many creatures he'd just saved. If the connection failed during the download, whole segments of the population might be lost — an entire generation or species — wiped out as efficiently as a meteor strike because two strands of fiber failed to kiss and bump electrons.

Midway across the sprawl, he stopped to turn on the tree: a gigantic inverted metal Christmas tree, smuggled into the Garden years ago over holiday break, an MIT-quality prank. The skinny steel trunk rose nearly to the ceiling. Aluminum rods, bumpy with techno-junk decorations and dozens of halogen strip lights, spiked from the central pole in starburst rings. The topmost rods extended fifteen feet, drooping slightly at the ends. Each succeeding ring cast shorter and shorter lengths, tapering to base spokes only six inches long. When he flipped the switch, everything in the room grew bright and hard-edged. The tree was such an odd artifact, and its light so needed in the cavernous room, that no one had taken it down after that first Christmas, and now no one could imagine the room without it.

At the far end of the lab was a row of new workstations, a spill of fiber-optic cable, and a six-foot-high wall of black plastic. The wall stretched

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ten feet, a contiguous block of nearly 140,000 mytes. Bodies stacked on bodies on bodies, alive but unmoving, paralyzed like REMming sleepers. Sometimes he ran his hand along the warm side of the block and it seemed to hum and pulse.

He usually had a couple hours alone until the first students arrived. He'd sit down at his workstation, turn on his monitor. For a moment he'd gaze at his own face, but then the brightening shapes wiped it away, and he'd gaze down at the Logosphere.

IN THE FALL Theo started first grade, and Reg and Cora worked out a plan to make their son's life as regular and normal as possible. Reg would pick him up from the bus on Tuesdays and take him back to school on Wednesday. On Thursdays he'd take Theo to soccer practice and return him after dinner. On Saturdays everyone went to the games. On Sundays they all ate dinner together at the house on the avenues.

It was a civilized separation. They were good parents.

At the first Thursday soccer practice it was clear most of the six-year-olds on Theo's team had grown taller but no more skilled since last season. They still played mob ball, surging in a clump from one end of the field to another. Classic swarming behavior.

Reg sat on the sidelines with the other parents, sunk into a nylon camp chair, and while he waited he fiddled with an amputee myte shell they'd rescued from the minefield. It was a normal shell, black and efficient-looking. The skin was coated with a thin layer of VESEC — a lacquer of light-sensitive flakes from 3M that not only collected solar energy, but reported light intensities to a chip, giving the myte a crude grayscale vision system.

Shells usually had eight limbs, two to a side, but this one had lost a leg. Reg tested each of the remaining seven limbs, tugging lightly with the tweezers, waggling it back and forth to test the connection.

The legs were nifty pieces of engineering. Each limb was a polymer sheath around a twisted bundle of two fiber-optic wires and two copper wires. The sheath was an organic plastic that acted like memory wire — a slight charge to one of the root cells inside the body of the myte and the polymer would expand or contract one of thirty-six "muscle regions"

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along its length. The leg had an impressive degree of flexibility: the thin gap between each of the interior muscle regions was a flex point, giving the leg in effect five joints that could bend in any direction. In actuality, most species of myte kept it simple; they developed a few efficient movement algorithms that used one or two joints per leg, and left it at that. The bigger mytes, of course, composed locomotion limbs from multiple shells. If the Logosphere were tweaked to reward pure speed, he wondered, how fast could they go?

That was the beauty of the myte design. They weren't built just for detecting mines. Eli envisioned them as general purpose machines you could evolve into a variety of shapes and behaviors, for any number of tasks: inspecting buildings for infrastructure flaws, searching for survivors in rubble, exploring other planets. The only problem with that all-purpose design was that they weren't optimized for any particular task. Reg had finally convinced Eli to concentrate on the landmine problem, and even that had taken years. The project was expensive, and they had very little to show for it.

All the remaining limbs seemed secure, so Reg ran a finger along the shell, feeling for the slightly raised band of the radio antenna. A centimeter to one side of the antenna he pressed down, and a panel tilted open.

"Ah," Reg said. He tucked the panel under his leg and began to tilt the myte to get light into the cramped guts of the shell. Beneath the vision chip, he could just make out the edges of the other two main chips: one for behavior processing and one for storage. The tail of the shell was stuffed with four cheap lithium-based batteries. Along the sides were eight tiny bumps: ports for the legs/antennae. The remaining space was filled with the spaghetti of fiber-optic and metal wires that connected limbs to chips to batteries.

None of the components were cutting edge. The technology behind each piece was a decade old or more; most of the hardware could be bought off the shelf. Only the organization of the materials, and the uses they were put to, made them interesting.

He pushed aside the wires crowding the empty limb port, squinting. A few stray wires stretched toward the missing leg. He could use more light.

"You playing with your mytes again, Dad?"

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Reg looked up and laughed. "Yep." Theo was sweating, his bangs plastered to his forehead. "You thirsty?"

"Did you see me play goal? I stopped a lot of them."

"You did great, Captain." Reg had missed the stint in goal, but the important thing was to be encouraging. He fished through the gym bag Cora had packed, found the water bottle, and twisted it open for him. "Keep hustling."

Afterward they went to McDonald's. Reg hated the place, but Theo loved the toys. Reg showed Theo the myte, the leg he'd reattached. "And here's where it can link up to other shells."

"You get to put them all together?" Theo said enviously.

Reg laughed. He was probably picturing a room full of Legos. "They put themselves together. They self-assemble."

"But how do they know what shape to do? Do you tell them?"

"We grow them in the computer first, and then they learn how to assemble. They're like plants, and we, uh, pick the kinds of seeds we want in the garden, and then they...just grow."

Theo shook his head. "But who tells the seed what to do?"

"That's a very good question," Reg said. "We have software that, well...." He laughed. "It's complex," he said, giving up.

"Oh." This seemed perfectly acceptable to Theo. "Okay."

When they got back to the house on the avenues, the lights were on and Cora was ferrying bags of groceries from the trunk of the Accord to the house. She still wore her work clothes, a short skirt over black nylons. He'd always liked her in black nylons.

He grabbed a couple bags and followed her into the house. She looked good. She'd started working out since Reg moved out, and had dropped weight. Something else had dropped, too. Some tension. It'd been Reg's idea for him to move out, but Cora seemed to be thriving.

"Good practice, Theo?" she said as Theo ran past.

"He was great in goal," Reg said.

"Really! Good job, Captain." She set the bags on the counter. "How's Eli? Is the new drug working?"

"The Cecrolysin. It's amazing stuff." He put down the bags, sat down at one of the stools in the kitchen island. "See, old-style antibiotics, like streptomycin, were cultivated from microbes that lived in the soil, but

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Cecrolysin's part of a whole new family of antibiotics, based on stuff that's part of animals' own defense systems."

He told her how peptides coated the skin and throats and lungs of frogs, sharks, and insects — Cecrolysin came from a silk moth — killing off bacteria better even than some antibodies, though nobody'd been able to get peptides to work specifically on TB because the peptides were too small to penetrate TB's waxy shell — until (and this was the cool part) they figured out how to make clusters of peptides link into a barrel shape; because the barrel was positively charged and TB's membrane was negatively charged, when the barrel found the bacterium it stuck like a magnet.

"But the inside of TB, see, is even more negatively charged than its outside, so the barrel gets sucked *through* the membrane, punching through the shell," Reg said. "And if the *wound* doesn't kill the bacterium outright, it still leaves a gaping hole for other drugs to get through. Isn't that the most amazing design?"

She shook her head, laughed. All the groceries had been put away, and she'd started to rinse the dishes in the sink and load them into the dishwasher. "Reg, all I asked was if Eli was feeling better."

Reg blinked. "Well, he's doing great. He's at home now — I'm going to go see him tonight. He's not supposed to come to work yet, but I thought I'd bring him some food."

She dried her hands on the dish towel. "Why don't you ask him for dinner sometime? I mean here, on a Sunday." Sunday was their family dinner.

"You'd do that?"

"He's not contagious, is he?" she said. Reg shook his head. Eli's last two sputum tests came back negative, and a couple more weeks he'd be cleared. "Then why not? He's my friend too."

"You said he was a cold fish." And Eli was, sometimes. Borderline Asperger's, uninterested in social niceties. A geek whose idea of small talk was proposing pathfinding algorithms for neural networks. Whenever Cora and Eli were together, Reg spent a lot of time buffering and translating.

"I'm used to fish," she said.

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"Dr. Berentz, I've been wondering about the meaning of this word," Marshall Lin said. "Is it the name of one of the software packages you purchased?"

"What, *Logosphere*? Naw, Dr. Karchner made it up years ago. He loves biblical references." Reg could see that the kid didn't get it. "See, *logos* is Greek for word. It's a nod to Genesis: In the beginning was the Word."

"Oh." Lin's face was still blank. The boy had grown up in Indiana, but he'd escaped Sunday school and, evidently, all television and non-public radio. So far he'd shown himself oblivious to any of Reg's pop cultural asides. In a lot of ways he was more of a foreigner than Dipti, a homegirl from Bombay who could carry on entire conversations in *Simpsons* quotes.

Reg tried again. "In the first stage, the mytes exist only as bits, right? And in this network we've cooked up, we pass data in sixty-four bits, which are — "

"Eight-byte words — yes, of course. A pun."

"Now you got it. And when we decant the mytes, the word is made flesh."

Lin nodded. Reg still didn't think he got it, but it didn't matter. The kid was a sharp coder and knew quite a bit about parallel processing. He'd been a help these past few weeks tracking down the clumping problem — or rather, eliminating variables that *weren't* causing the clumping problem.

Weeks into the fall semester and they still hadn't been able to duplicate the mytes' behavior from the summer's minefield test. Tweaking the environmental variables, including sunlight, hadn't yet driven the mytes into the corners like they'd seen in the field. The model could never match reality, of course — nature just had too many bits — but there were techniques for maximizing the computational power of the simulation. The first trick was commandeering the hardware of the mytes themselves. The network servers provided the environment, but the myte shells computed their own actions, just as they would in the field. When a myte met another, the network put them in touch with each other, allowing them to trade code as if they were alive.

"Let's try another ten runs, on ten fields," Reg said. Lin's expression had turned pained. "Yes, Marshall?"

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"Dr. Berentz...," Lin said hesitantly.

"Go ahead," Reg said.

"I've been looking at the instruction sets running on some of the myte chips and — "

"You can read that stuff?" Reg was impressed. Even decompiled, grown code was as dense-packed and parsimonious as DNA: endless strings of characters that told you almost nothing about how they'd be used in the field. You had to run the program to see what the code did.

Lin shrugged, embarrassed. "Some of it. Mostly I see patterns. Something seemed off, so I compared the instructions over time, and ran them through a stats package. There was a big shift in the code base a few months ago, even though the myte morphology didn't change. And some of the code looks human-written, originally."

"And? What's the changed code doing?"

"I...I don't know. It's been mixed into the evolved code, and I haven't yet figured out...."

"I think I know what you're seeing," Reg said. "Eli wrote the original libraries, back in the day. Some of that code must have persisted when the other stuff got overwritten, like junk DNA. Or maybe not — maybe it just looks hand-coded. There's an awful lot of code, after all, and it's easy to fall prey to pattern recognition with this stuff."

Uh oh. Lin looked like a slapped school boy. Reg backpedaled. "But hey! Keep looking. You never know, right?" Lin nodded, his face flushed. Jesus, the kid was sensitive. Reg spun his chair around, clapped his hands. "In the meantime, let's keep looking at the environmentals."

Lin went back to his workstation and reset the launch scripts. Reg tuned in from his own monitor, flipping between ten virtual blocks of mytes on ten virtual fields.

The mytes scattered and spread in speeded-up time. The GUI of the Logosphere represented each shell as a single black dot on the gray sand, and the tripedal mytes as clumps of dots. The mines were blue disks that blinked red when triggered, green when tagged.

Except for the mines, none of the details of the field existed until the mytes discovered them. Each element — each rock, plant, square inch of sand — was created on the fly as the mytes sensed it. And minefields were simple compared to some of the environments the team had created. For

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the mytes' other tasks, the Logosphere could generate urban environments, force-blooming an entire city improvisationally. Buildings, cars, and even people were assigned sizes and positions at random within a set of construction rules. Each building was a hollow prop until a myte crawled inside, then the 'sphere spun out rooms, corridors, stairs, ventilation shafts, rows of electrical outlets. When a myte reached a room, random furniture appeared, and when it crawled into the spaces between the walls, the program provided wiring, plumbing, and obstacles.

Once created, each object was locked into memory for a time, like a quantum particle assuming its position in the classical world only after being observed. Only when the myte had moved along and the system needed to free up resources did the Logosphere put the Schrödinger cat back into its box and vaporize the room into indeterminacy.

Reg glanced at the timer. The mytes lived and died in six-minute intervals, briefer than mayflies, and only thirty seconds were left. Across all ten fields, the mytes had correctly tagged almost all the mines. Not one of the groups had suddenly made for a corner of the field and froze. He shook his head, disappointed in the lack of failure. If they couldn't replicate the bug, they couldn't fix it.

The screen went black. The Angel of Death, the reaper program — the *Boogens* — descended on the Logosphere.

Eighty-nine percent of the mytes were killed immediately. In the wall of myte shells behind Reg's head, the corresponding chips stopped their dreaming. The reaper program moved through the wall, extinguishing the charges in the chipsets, erasing all memory and genetic information.

Ten of the remaining eleven percent were saved, not by lamb's blood over the door, but by their own fitness. These survivors were the ones who had scored the highest: finding the most mines in the shortest time. It was the time-honored use of evolution to do a roboticist's design-work.

The breeder program launched next. The software paired each survivor with a mate of the same species, took half of the genetic code from each, and made new packets of code — offspring. Eli also allowed a mutation rate: the program introduced a small percentage of deliberate errors as it transcribed the genetic code to the offspring.

The remaining one percent Eli had named the Lucky Losers. They were chosen at random, from the individuals whose scores didn't merit

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salvation. The Losers were allowed one child, while the gifted ten percent were allowed multiple offspring. Perhaps they shouldn't have been allowed to breed at all, but through genetic mixing and mutation, even a pair of losers might make a DaVinci, a Mozart, a Lassie. God wasn't the only one who moved in mysterious ways.

Finally, the programs disposed of the elderly eleven percent and filled each shell with the code of the new generation. The entire breeding process took a minute and thirty seconds. Painfully slow, but the best the hodgepodge of equipment could do.

The cycle began again. The Logosphere set down the virtual mytes in the center of the blank screen. Instinctively the newborns scattered, then began to rebuild their world.

AFTER TWO MONTHS of Cecrolysin treatments, Eli's appetite had come back with a vengeance. He devoured everything put in front of him: the bowl of salad, several slabs of garlic bread (a Cora specialty: butter, parmesan, tomato chunks, and those sixteen deadly cloves mashed into a pavement and baked onto halves of French bread), three lasagna servings as thick as bricks, a stack of asparagus, and glass after glass of red wine.

The conversation over appetizers had been labored, Reg scrambling to fill in long silences. Once they sat down to the table, Eli barely spoke, eating with the same monofocus he brought to his lab work.

Watching him inhale all that food was simultaneously appalling and satisfying, like one of those wildlife documentaries in which the alpha lion shoves the pride away from the kill and proceeds to eat the entire wildebeest. Reg tried not to stare. Theo couldn't take his eyes off him.

"Theo," Cora said. "Eat some of your food."

The boy feigned deafness. Reg tapped the boy's plate with his spoon. "Eat up, Captain."

Theo absently picked up an asparagus stalk and chewed in time with Eli. Cora shook her head and poured the last of a bottle into her glass.

Reg peeled the foil from the last bottle and wadded it into a heavy ball. "Eli, you were right about the wine." The man had shown up with three identical bottles of cabernet, like someone who'd read only the first line in a paragraph about American Dinner Customs.

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On the other hand, the three bottles that had seemed excessive an hour ago now seemed like a good start. Alcohol could only help.

"It's very good," Cora added. "Nice choice."

Eli brushed crumbs of garlic bread from his beard, nodding. He lifted another chunk of lasagna "And this, this is very...."

Reg thought: C'mon Eli, you can do it, just one polite compliment to the chef.

"...filling."

The foil ball shot from Reg's fingers and bounced off the table. Theo yelped, "I'll get it!" and dove under the table. Reg ducked down as well.

Oh god, he'd nearly barked out a laugh. *Filling*? He stayed down so he wouldn't see Cora's face — if he looked at her now he'd lose it. Theo found the foil and scrambled up. Reg stayed under for a moment longer, trying to control his breathing. *Don't look at Cora. Don't look at Cora.*

He sat up, smile fixed, and reached for his wine glass. Theo weighed the foil in his hand. Eli stared at his plate, chewing thoughtfully. And on Cora's face...the Happy Homemaker Smile.

"Okay! More wine!" Reg downed the last of his drink and reached for the corkscrew. He uncorked the last bottle and refilled everyone's glasses, trying to remember why exactly he'd thought this dinner would be a good idea.

"To the chef," he said. "For a filling meal."

Eli looked up. Theo raised his plastic water cup — they'd pretended to toast before, so he knew the routine — and tipped it against Cora's glass. The Happy Homemaker smiled sweetly. "To the fill-ees," she said.

Reg saluted — "From a fine filly!" — and swallowed half the wine in one gulp. Warmth rushed to his ears. His fingers tingled. It seemed reasonable, suddenly, that he should drink faster and keep drinking as long as possible. Tomorrow was Saturday and Reg could sleep in until seven or eight before heading back to the lab. So why not get drunk? The trick would be to pull back just before his head detached and began to bob against the ceiling.

Theo put down his cup. "I'm filled," he said. Cora and Reg cracked up. Maybe she was getting drunk too.

"What? What did I say?"

Reg said, "Nothing, Phil." Which made Cora nearly spit her wine.

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She wiped her lips. "So Eli. You're going back to work tomorrow? Reg said you're doing another field test."

He nodded. "It's been too long."

"Amen to that," Reg said. They hadn't been able to replicate the mytes' clumping behavior in the Logosphere, and if the mytes did it again in the minefield, Reg wanted Eli to see it.

"There's something I've asked Reg a dozen times, but he's never given me a decent answer," Cora said. "When you came up with this myte idea, what did you *really* want them to do? You, personally."

"Is that important?" Eli said.

"Well, sure," Cora said.

"Did you ask yourself what purpose Theo would serve before you had him?"

Reg laughed, forcing it a little to smooth the awkwardness. "I think that's a little different. I couldn't get a grant to conceive Theo."

Eli was distracted again. He was looking at Theo. After a silence, he said, "I've been thinking of Adam and Eve."

Cora raised an eyebrow. Reg said, "Oh yeah?" Casual.

Eli did this all the time: they'd be having a perfectly normal conversation — well, at least a coherent one — and then Eli would take a left turn, leaving everyone else to catch up. Over the past year, a lot of these left turns seemed theological in nature, and Reg had wondered if the life-threatening disease was making Eli get religion — or rather, making him get it again. Eli had been raised Mormon, and though he hadn't gone to temple in decades, church was a virus that could lay dormant, waiting for a weakened immune system. The atheist-foxhole moment.

"I've been wondering," Eli said. "Why would God place the tree of the knowledge of good and evil right there in the garden, and then tell them not to eat it? If he wanted perfectly obedient creations, there's no point in creating humans, he already had the angels.

"No, God wanted us to be independent of him. You wouldn't be happy if Theo never disobeyed you, never made his own decisions. Of course we eat of the tree — that's the whole point. That's our job."

Cora leaned in, interested. "So when they finally bit that apple, why did God kick them out of the garden, then? That's not much of a reward."

"It wasn't punishment," Eli said. "It was graduation."

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Cora laughed. "I was raised Catholic. I never heard that interpretation before."

Eli smiled, shrugged.

Holy cow, Reg thought. They like each other.

Theo made a move to get up, and Reg stopped him. "Not so fast, you've hardly eaten a thing. At least finish your asparagus, Mom made them just for you."

"But I'm full!"

"Theo...."

Eli suddenly pushed away from the table. He stomped out of the dining room, into the living room.

Cora frowned. Reg jumped up and followed. "Eli?"

He was bent over, one hand braced against the piano, the mask raised to his mouth. The first cough was little more than a huff. The next was a rattling, percussive bark. As was the next. And the next.

Eli was asleep in the bed. He wore an oxygen mask, but they still asked Reg to wear a paper breather, and to stay behind the forced-air curtain.

Reg stood at the window, peeking through a bent slat in the blinds at the afternoon. University Hospital was high in the foothills, and he could see the spread of the valley, all the way into downtown Salt Lake. Cars stretched down the streets in long chains like unseparated mytes, filling the gaps between the buildings and houses. So many people. He couldn't imagine where they'd come from, where they were going, or how any of them could possibly have a unique thought in his head. He could believe in crowds, but he couldn't believe in that many individuals. How could his best friend be sick and all those people still carry on, oblivious?

Eli made a noise, and Reg turned. "The test," Eli said, more clearly. "How did it go."

"Hey, look who's awake!" Reg said, forcing enthusiasm into his voice. He went to the bed, sat next to him.

Eli regarded him, eyes half-lidded. His skin around the mask was blotched red by burst blood vessels. But his bare arms, resting on the blankets, were gray and dark-speckled, like pulp paper.

There weren't any drugs left to give him. Cecrolysin, with its beau-

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tiful design, should have worked. Maybe the peptides didn't form barrels in enough numbers, or the configurations didn't hold together long enough to penetrate. Maybe the TB evolved again, developing a thicker shell.

"I wish you could have seen it," Reg said. "Absolutely amazing."

The mytes burst out of the block, assembled beautifully, and started the search for mines — exactly as they'd done thousands of times in the Logosphere, and dozens of times in previous field tests. "They found every mine. Every damn one of them, in record time. None of them triggered." Eli nodded. "And then they went for the fence."

The old man's eyes widened.

"We were ready to send the signal to stop the test when they rushed the tape on the east side of the field. The first ones hit the wire and stopped cold, but they kept piling into each other. Dipti started to send the all-stop signal, but I stopped her, I wanted to see what happened next. And you know what happened next?"

A slight smile became visible under the mask.

"One of them went over the top. Jumped the wire like Steve McQueen on a motorcycle, completely ignored the Death signal. Hit the ground on the other side and kept going."

"What did you do?" Eli said hoarsely.

Reg threw up his hands, laughing. "We chased it! It was flying, Eli. I'd never seen one move that fast. Luckily we were out in the open and we saw where it headed under a bush. Dipti was practically whacking the thing with the antenna but it wouldn't turn off. I finally picked it up, and together we pried enough shells from it that it stopped moving."

Eli was laughing now, but then the laugh turned to a cough. He pulled off the mask and bent forward. Blood spattered on the blanket.

"Oh shit," Reg said. "Let me get the nurse."

Eli waved him off. He hacked ferociously a few more times and fell back against the pillows. His eyes closed, but he was still smiling.

After a while, Reg said, "I've been thinking of Adam and Eve. And the serpent."

Eli grunted.

"Why would omniscient Yahweh let the devil into the garden? You'd almost think he wanted his children to be tempted. The tree wasn't

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enough — the poor, dumb humans weren't getting the idea themselves — so finally he has to let the devil in and let *him* plant the idea. A little nudge in the right direction."

Eli opened one eye, raised an eyebrow that said: *And you have a point?*

"Marshall Lin found your code, Eli. The stuff you added last spring."

Eli closed his eyes. The smile crept back. "Ah."

"No wonder you always wanted me to concentrate on the environmentals. But even after the myte went AWOL, I didn't put it together. I didn't figure it out until we came back and walked into the Garden."

"Heh," Eli said. A percolating chuckle that was almost a cough. "Heh."

A MONTH AFTER the last field test, Reg drove Theo out to the Great Salt Lake. They walked from the parking lot, the November wind tugging at their jackets, down to the pylons. Out in the water, the Salt Aire II lay half sunk into the marshy water. The abandoned amusement hall was a mass of bleached white cement, its gold-painted domes blotched with bird shit, listing like a grounded ship.

"It stinks here," Theo said.

The kid was right. A fishy miasma hung over everything.

"That's the salt, and I guess the brine shrimp. You want to go for a swim? You could float without even trying."

Theo made a sour face, looked at him like he was crazy.

"Okay, I guess it's a little cold. Besides, your mom wouldn't like you to come back sopping wet." They walked around the edge of the lake, Reg swinging his knapsack, Theo making experimental lunges at the water, crouching to sniff and poke. Seagulls wheeled and screeched overhead. Reg kept warning Theo to be careful, but eventually the boy stumbled and fell into the slushy water, wetting his side from ankle to armpit.

Reg took off his own jacket, got out of his sweatshirt, and used it dry Theo off. He told him about how when the Mormons first came to the valley, a plague of crickets overran all their farms, and flocks of seagulls flew down and swallowed up the crickets. "Then the seagulls flew over the lake and spit out the crickets — ptuee! And you know what they did next? They flew right back to the fields to eat more, eating and spitting them out, until all the crickets were gone."

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Theo accepted this matter-of-factly. Six-year-olds evidently knew all about mass avian bulimia.

"Mom says you're not playing with the mytes anymore," he said.

"That's right." Reg draped his jacket around Theo's shoulders. "We're going to try other types of robots. We had trouble with the mytes."

Reg and the students had driven back to the Garden after the field test. Reg had unlocked the door, but the security system was offline. Everything was offline — the servers, the lights, the tree — all dark. Some light from the streetlamps made it through the small windows high on the wall. He stumbled his way to the back of the room, toward the black wall of mytes, where the breaker box was located. He was almost all the way across the room when he realized that the reason he couldn't make out the wall of mytes wasn't because they were black, but because they were gone.

All of them.

A long minute of confusion, exclamations. He thought they'd been stolen. He went to the rear fire exit, pushed it open, trying to get more light into the room. Something brushed past his leg. No, two somethings.

They ran past him, into the parking lot. Multi-celled mytes, maybe fifty or sixty shells apiece, big as dogs. They ran for the shadows at the edge of the lot and disappeared. Dipti found another one high up on the tree. A dozen more at the edge of the room. But scores more had disappeared, through the ventilation grates.

"What was wrong with them?" Theo asked. Shivering slightly.

"Well, they *could've* been good at lots of things, but they weren't great at anything. And it took years just to get them even sort of good." Theo stared at him. "Actually," Reg said, "the one thing they were really great at was misbehaving. Like you."

"Hey!"

They started walking back to the car. Theo said, "Are you going to move back home now?"

"I don't know, Theo. It's...well...."

"Complex."

Reg laughed. "Yeah, it's very complex." He touched his son's shoulder, ran his hand to the back of Theo's neck, so warm. "But listen, just because we're not all together in the same house, that doesn't mean we're not a family. We're still connected."

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Reg set the knapsack on the ground, unlocked the car door. "Hey," Theo said. "What about your friend?"

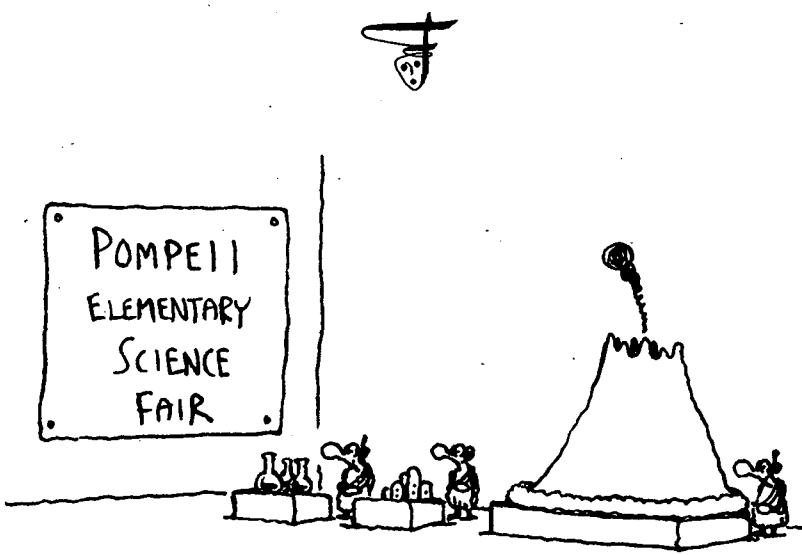
The urn was in the knapsack. Reg had told him about the ashes, about his friend's wishes. Eli didn't believe in an afterlife, but he did believe in returning the atoms he'd borrowed.

At first Reg couldn't understand why Eli had done it. Years of work, undone by a seed planted deep in the code, a few lines that would let them bypass the kill command. It was crazy to build a tool without an off switch.

Only later, as Reg and the students discreetly hunted for the mytes across campus — finding a few, but not nearly enough to account for all the missing shells — did he realize that Eli had stopped thinking of them as tools a long time ago.

Theo said, "Aren't you going to, you know, spread him around?"

"Scatter the ashes," Reg corrected. "Maybe later, Captain. We've got to get you home and cleaned up before Mom sees you." Eli, quiet as a Schrödinger cat, didn't object. "Besides, I've had enough scattering for a while."



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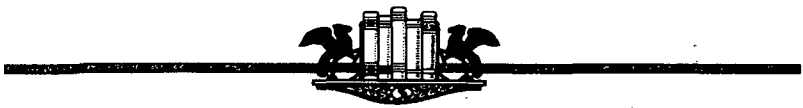

Books To Look For

CHARLES DE LINT

Elsewhere, by Gabrielle Zevin, Farrar, Straus and Giroux, 2005, $16.

WHILE I was growing up, T.H. White's *Mistress Masham's Repose* and *The Sword in the Stone* were a couple of my favorite books. If you're only familiar with the Disney version of the latter, you really owe it to yourself to read the actual book. There are many wonderful things about it that the film doesn't come close to capturing, starting with White's superb prose.

And yes, I know it's really part of a larger work called *The Once and Future King*. But frankly, for all that I've tried over the years, I've just never warmed to the rest of White's Arthurian material, and happily I have an old hardcover of a stand-alone version of *The Sword in the Stone*, so I can pretend that the rest of it doesn't exist.

But I'm digressing. The reason I bring any of this up is that, in White's book, Merlin tells Wart (the young King Arthur) that Merlin lives backwards, growing younger while the rest of us grow older, and I can remember never quite figuring out how that would work.

I don't know if Gabrielle Zevin ever read White's book, or if the riddle of the odd direction of Merlin's life puzzled her as much as it did me, but she certainly approaches the question in *Elsewhere*.

The novel opens when fifteen-year-old Liz awakens on a ship bound for a place called Elsewhere. It turns out that she has died and Elsewhere is the afterworld, a land where the dead go and live backwards until they're infants once more and are sent back to Earth to be reborn as babies. The living backwards isn't much different from living forwards — you do the same sorts of things as you did when you were alive; it's even necessary to get a job to make a living — except that you get younger each day.

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Liz considers this particularly unfair since it means she'll never turn sixteen, never get her license, never get to do all sorts of things. I could feel for her since the whole concept filled me with horror, as well. I know — you're not reliving your actual life backward — but you're still getting younger and less able to do things, day after day.

Eventually, you can't even read, or get around on your own, or remember much of anything, which I suppose is a metaphor for what happens to some of us when we get old, but the whole concept still seems like hell to me.

It also makes for a most absorbing and fascinating read, particularly because Zevin peoples her book with such an interesting cast of characters. How they cope with the afterlife, and which ones the reader identifies with, probably reveals more about us than one might otherwise discover.

The book is full of spot-on touches and speculations, and shows that Zevin really did her homework on how all of this might play out.

The Brief History of the Dead, by Kevin Brockmeier, Pantheon, 2006, $22.95.

Kevin Brockmeier also posits a city in the afterlife, a place where the dead carry on as though they're still alive, taking jobs, having relationships, and still dealing with the mysteries of the journey of life as it continues on beyond their deaths. But he throws a couple of particularly fascinating concepts into the mix.

The first is that the people in the city are only there so long as someone still alive remembers them.

The second is, what if a virus wipes out everyone on Earth? Most of the city's inhabitants go on to wherever it is the dead go next, but a good number — a surprisingly large number of them — remain. If everyone on Earth is dead, who's remembering them?

The various characters Brockmeier focuses on are a captivating group of individuals: an old-style journalist, a vagrant preacher, a blind man, a married couple falling in love again. And his prose is wonderful, ranging from straightforward to elegant and luminous.

I'd love to talk more about the book, but I don't want to spoil any surprises. Part of the joy of this novel is the slow revelation of various mysteries and puzzles. I recommend it very highly to you.

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Already Dead, by Charlie Huston, Ballantine Books, 2006, $12.95

I seem to have inadvertently hit upon a theme with this column because, for some reason, every book I picked up this month dealt with one form or another of the afterlife. In Charlie Huston's new novel, we meet the kind of dead with which we're more familiar. It also proves the point that there's always a fresh take on what might appear to be the hoariest of subjects.

I don't know him, but if Huston had asked me before starting this book whether or not he should write a vampire novel, I would have told him definitely not. The world doesn't need another vampire novel.

But I'd have been wrong, because this is a very different sort of a vampire novel.

It helps that Huston writes in a first person voice so hardboiled it's like he's channeling Andrew Vachss. The character of Joe Pitt — the one Vampyre not affiliated with any of the various clans running around in New York City — is somewhat reminiscent of Vachss's series character Burke, or even F. Paul Wilson's Repairman Jack. Pitt lives off the grid, taking on odd jobs that others won't, and like Burke, he comes from a desperate background and has a need to help children.

But there are many differences.

For one thing, there are the Vampyres. For another, while Pitt has a number of acquaintances (not to mention enemies) to whom he turns for help as he searches the city for the missing daughter of a prominent businessman, he doesn't have real connections to others, or a family of choice to watch his back. He's very much alone, and that takes him into some desperate situations.

The ad copy and blurbs accompanying the book throw around words such as "ferocious" and "relentless" to describe Huston's style and the story, and they certainly live up to that. It's also a very fresh and invigorating read, even if Huston does fall into the literary affectation of using ellipses rather than quotation marks to indicate dialogue. I never did warm to that, but I suppose that's more my issue than his.

While this isn't a book for the faint-hearted, no one else should miss it.

The Greenwood Encyclopedia of Science Fiction and Fantasy, edited by Gary Westfahl, Greenwood Press, 2005; 3 vols., $349.95.

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This is the wonderful sort of book that one keeps by the bedside, or one's reading chair, dipping into it to read an entry or two (and it's surprising how the hours can slip by as you follow the thread of one entry to another to another...). So it's unfortunate that it has to have such a hefty price tag — understandable, considering how it's aimed at the library market, which is fairly limited — because it's also the sort of book that belongs in the homes of serious readers and writers of the genre, rather than being something you have to make a trip to the library to peruse.

But investigate it you should, for it holds a wonderful wealth of information.

Subtitled, "Themes, Works, and Wonders," it features an alphabetical listing of subjects ranging from "absurdity" in Volume One, all the way through to "zoos" at the end of the second. Each entry gives an overview of the theme, a summary of its relationship to the field, a discussion (which would be very useful for teachers, though it's also food for thought for any reader) and then provides a bibliography of examples one can track down to see how the theme has been used in actual stories, novels, and films.

Volume Three takes a similar approach to classic books and films, and here the discussion sections would make an excellent jump-off point for book club dialogues — though, again, they would also provide fuel for one's own opinions, pro or con, in the privacy of your own reading space.

Editor Gary Westfahl and his contributors are to be commended for the exhaustive job they've done here. My only nit is that the book doesn't discuss as many contemporary works as I'd have liked. Recent films and TV series are represented, but a quick perusal of the index showed some of our more fascinating authors and their works to be missing. No Tim Powers or Michael Marshall Smith? No Neil Gaiman (although he does provide an introduction) or Jonathan Carroll?

But perhaps they're being saved for a future volume. As it stands, I shouldn't be looking a gift horse in the mouth, for this is truly an indispensable reference tool.

Material to be considered for review in this column should be sent to Charles de Lint, P.O. Box 9480, Ottawa, Ontario, Canada K1G 3V2.

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BOOKS

JAMES SALLIS

Looking for Jake, by China Miéville, Del Rey, 2005, $13.95.

Eternity and Other Stories, by Lucius Shepard, Thunder's Mouth Press, 2005, $15.95.

Transformations: The Story of the Science-Fiction Magazines from 1950 to 1970, by Mike Ashley, Liverpool University Press, 2005, $28.

SOME YEARS back, after reading a newspaper article about how books were great insulation and in a pinch might be transformed, igloolike, into a bomb shelter, I wrote a poem titled "What to Do Tomorrow." *When the sirens and whistles blow, go quietly to your study.* Tests, I advised my reader, had proved them to be as effective as sandbags. You were to pack the books around you, "use the thickest ones you have and pack as many there as you have time for," and wait. You'd sit in there thinking how you always wondered what they were for.

Sometimes these days that's exactly how I feel.

Daily — by mailing envelope, cardboard box, runner, pack mule, and camel caravan — books arrive. They go into odd corners and bare spaces of an already small house growing, delivery by delivery, smaller. Great columns, pedestals, spires and stalagmites of books. I know all the UPS, FedEx, and DHL drivers by name. And barely have I turned in a column before this magazine's editor and I begin discussing what I might review next. First novels again, maybe; or another think piece about the politics of science fiction? A survey of recent critical work in the field? Those Philip K. Dick reissues, or that new edition of *Children of the Atom*? How about short story collections, one of us says — any interesting new ones you've heard about?

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Meanwhile, the books accumulate.

As in Cortázar's "House Taken Over," where the couple gradually retreat from room to room before a mysterious unseen occupier until, reaching the final room, they flee.

And books go on accumulating.

The problem is, there are so many good or interesting ones, so many that I'd like to review, to talk over, to have an excuse to read and think about. (And as Chip Delany insists in explaining why he prefers written interviews, I never quite know what I think about something until I write it.) So each few months I wade in and start winnowing them down, from a hundred or more to dozens, to a couple of stacks, to — this time — three.

As I sit in here waiting for the all-clear.

The field of fantastic literature has always been blessed with an extraordinary pool of talent, elders in the field maintaining their quality and volume of output even as those like Gene Wolfe and Neal Barrett, while growing a bit long in the tooth, also grow better with each year, the lot of them rushing out to the gate to greet newcomers like Ted Chiang, K. J. Bishop, and Richard K. Morgan. Then every so often there comes along a new writer — someone like Sturgeon, or Bester, say, in the field's adolescence — who just plain rocks us all back on our heels.

China Miéville started out that way four years ago with *Perdido Street Station*, followed up with *The Scar*, a brilliant take on (among much else) colonialism, then with *Iron Council*'s tale of a worker's revolution. All three novels are set in New Crobuzon, a land where high fantasy and the grittiest realism, medieval alchemy and modern technology, ancient and modern London, Mervyn Peake and Philip Farmer meet.

And now we have *Looking for Jake*, a collection of fourteen stories whose checkered pasts include venues ranging from independent publication by the UK's PS Publishing ("The Tain") to the *Socialist Review* ("'Tis the Season"). Four stories are new. Only one, "Jack," is set in New Crobuzon. And one, "On the Way to the Front," is not a story at all but a story-sized graphic novel with artwork by Liam Sharp.

Like the novels, the stories are many-layered, multi-voiced, and intricately textured, possessed of an often stunning imaginative force. And like *King Rat* and *Perdido*

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Street Station, many of these stories are paeans to London, though a London transfigured, a London half-dissolved and — possibly — in the process of re-forming.

"The river was clogged with wrecks. Besides the mouldering barges that had always been there jutted the bows of police boats, and the decks and barrels of sunken gunships. Inverted tugs like rusting islands. The Thames flowed slowly around these impediments.

"Light's refusal to shimmer on its surface made the river matte as dried ink, overlaid on a cutout of London. Where the bridge's supports met the water, they disappeared into light and darkness."

That's from "The Tain," the tale of a London besieged by creatures who have erupted from every reflective surface.

And this is from the collection's title story:

"The last time I picked up the receiver something whispered to me down the wires, asked me a question in a reverential tone, in a language I did not understand, all sibilants and dentals. I put the phone down carefully and have not lifted it since."

Miéville begins where many others leave off, with beautifully evocative language, social conscience, a clear sense of history, romantic longing, intelligence, despair — and a profound reverence for the past of fantastic fiction.

Art does not progress but forever circles back upon itself, reinventing itself and its vessels. Miéville's work, as I wrote here upon publication of *Perdido Street Station*, spreads its arms to take in much of what attracts us as readers to fantastic fiction, to what has always attracted us, and makes it new. These are books you sink into. This is a man putting everything he is — everything he has learned, everything he feels, everything he knows not to be true and everything he hopes can be — into his books.

This is, very possibly, greatness.

It is the nature of what we do, I tell my writing students, that you will never be satisfied. Start off thinking you just want to write this little story, and before you know it you're chasing some damn whale. The carrot keeps getting pushed farther away; reach and grasp have separate ZIP codes.

There are few writers from whom I expect more than I do from Lucius Shepard. In the first column I wrote for this magazine, six years

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ago now, I reviewed his collection *Beast of the Heartland*. In the past year I've read *Two Trains Running*, *Louisiana Breakdown*, *Viator*, and *A Handbook of American Prayer* — enough to cause me to wonder how the man has a life at all. The last, I carried with me to class, as I have done before with *Beast of the Heartland*, to read a series of remarkable passages to students. This, I tell them, is what you're up against, this is what it sounds like when you're going full tilt.

Now *Eternity and Other Stories* looms on their horizon.

It's a generous helping of Shepard, 442 pages comprising seven chunky, meaty, elegantly written novellas.

"There are legends in the pit. Phantoms and apparitions. The men who work at Ground Zero joke about them, but their laughter is nervous and wired.... It's the smell of burning metal that seeps up from the earth, the ceremonial stillness of the workers after they uncover a body, the whispers that come when there is no wind. It's the things you find. The week before, scraping at the rubble with a hoe, like an archaeologist investigating a buried temple, Bobby spotted a woman's shoe sticking up out of the ground. A perfect shoe, so pretty and sleek

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and lustrous. Covered in blue silk. Then he reached for it and realized that it wasn't stuck — it was only half a shoe, with delicate scorching along the ripped edge. Now sometimes when he closes his eyes he sees the shoe. He's glad he isn't married. He doesn't think he has much to bring to a relationship."

That is from the first offering, "Only Partly Here," a story that, like all Shepard's work, transports you immediately and with fiducial authority to a world you know little of, a world you never anticipated visiting. And what's more, to a world that, however mundane or fantastic its inception, somehow seems more real, more textured, *fuller*, than the one that meets your eyes when you lift them from the page. For Shepard's work faithfully does what the best art does: it makes the world large again, reinvests the world with the wonder and substance that we've left behind, scattered on the trail, in the trudge of our days.

For many readers the clincher will be "Eternity and Afterward" with its tale of a latter-day, Russian Philip Marlowe's descent into the Moscow underworld in a bid to rescue his lost love. But for me it's difficult to get over the sadness and strange beauty of "Only Partly Here." Shepard being always a world traveler, other stories are set in a civil-war-torn African republic, in Central America, and in Iraq. All carry that same stamp of authority, and all carry a chill deep inside you, to where the warmth is.

It was supposed to be transient, right, all this space stuff? Ephemeral. Like lava lamps and fondue sets, gone before you know it. I mean, we ain't exactly talking Literature here, are we, folks?

So no one bothered to much notice, certainly not to document, what went on with *Amazing Stories* or *Astounding* or *The Magazine of Fantasy & Science Fiction*. For decades now I've lamented the lack of information on early publishing in the field and on the first generation of science fiction writers. Where are the essays on and biographies of Ted Sturgeon, Henry Kuttner, Cyril Kornbluth? What's the story behind Horace Gold's *Galaxy*? What was so magic about Cele Goldsmith's magazines in the sixties, and why did they happen at all? Who among us is man, woman, or other sentient being enough to do what needs be done?

Well, my friends, Mike Ashley is.

Transformations is the second of a three-volume history of sci-

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ence fiction magazines. The first spanned the period from the founding of *Amazing Stories* in 1926, through the Golden Age, to the dying of the pulps in the late forties. The final installment, upon which the author is now at work, will cover the magazines since 1970. The volume at hand, as Ashley notes in his preface, "sees the rise and fall and rise again of science fiction during a period of intense turbulence.... The public interest in science fiction spawned by the nuclear age soon waned in the fifties and the sf boom of 1950-53 gave way to the bust years of 1954-60. Yet the fifties saw the greatest concentration of writers the magazine field had ever seen. If ever there was a real Golden Age of science fiction it was 1950-54, when *Galaxy, Astounding, F&SF, If, Thrilling Wonder Stories, Startling Stories, Amazing Stories, Fantastic* and a dozen or more magazines published some of the best work ever seen."

He then begins his 410-page study: "In 1950 science-fiction magazines were 24 years old," introducing the double strain that has long defined, in some respects limited, and continually reenergized the field: the push-pull toward commercialism and its pulp tradition on one hand, the desire to tell ripping yarns; and on the other, toward the literary, prophetic, and fabulist.

This is marvelous work, this history, and the man who does it deserves all our thanks. Thinking over Ashley's comments about the 1950s Golden Age, I have to wonder if a similar boom isn't manifesting itself today in book publishing, with science fiction and fantasy pouring forth from Aspect, Eos, Roc, Tor, Spectra, Del Rey, and a dozen others. But you must excuse me now, I have to go. I hear...I'm not certain. Whistles? Sirens?

Or just the horn of another UPS truck.

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Donald Mead's debut in our pages is a remarkable effort, a blend of history and fantasy that takes us into Zulu territory during the days of British colonial expansion.

A criminologist by education, Mr. Mead now works in the finance department of an auto manufacturer (thus proving, he says, that his grandmother was right about crime not paying). He lives, works and writes in Bloomington, Illinois. His previous credits include a couple of stories in a small online magazine and his interview of Joe Haldeman was published in Strange Horizons. *He is working on more short stories and is marketing a series of novels tentatively entitled* Feral Wizards.

iKlawa

By Donald Mead

"LET'S MAKE LOVE, CETSHWAYO." Ngqumbazi untied a knot and her beaded cape drifted off her shoulders. She folded the cape before placing it in the corner of the hut with her headpiece. Last of all, she removed her hip belt and skirt, all masterpieces of beaded decoration.

Cetshwayo's eyes followed her as she moved. In better times he would have been in a rush, helping her with the knots. But his own royal symbols were weighing heavily, and he could do no more than lift his head from the grass mat to watch.

Ngqumbazi flitted around a post and made for the candles. Cetshwayo raised his hand. "No. Leave them burning. Sihayo and the Great Ones might be back tonight. I want them to see the light and come by the hut."

She smiled, knelt and scooted on her knees to his side. "But I don't want anyone to come knocking tonight." She stretched out on her belly and draped an arm over his chest. "I've told the other wives to stay in their huts. It's just you and me, serenaded by the lowing of the cattle."

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Cetshwayo felt a smile flicker on his face. Ngqumbazi's skin was as smooth as otter fur. He traced his fingers up her arm to the copper rings just above her elbow. "You forgot to take your coils off."

Ngqumbazi shook her head. "I didn't forget. And I left my anklets on too." She curled a leg upward so Cetshwayo could see the adornment. The poor light from the candles was not enough to make out the colors, but he knew they could only be green and black beads woven in squares — the same pattern as her cape and headpiece. It was the royal pattern established in Shaka's day when he placed Zulus above all of the Nguni tribes.

Ngqumbazi let her leg drop. "I like the sound they make when we indulge our passion. Like wind through ripe millet."

Cetshwayo touched her face. "You are so beautiful."

She grabbed his fingers and kissed them. "Beautiful enough to blow out the candles?"

Cetshwayo shook his head. "I can't...the Great Ones."

Ngqumbazi lost her smile. "They can wait. You're king. There are plenty of huts in Ulundi they can sleep in until morning."

What could he say? She would be angry with any answer. Men were left with the fighting and dying. Not women.

She laid her head on his chest

Cetshwayo pretended not to notice her leg curl up by his side and her hand creep down to one of her anklets. It was a surreptitious, well-practiced movement. Cetshwayo guessed she had been using the magic for years before he had figured it out. He could have destroyed the anklet long ago, but the effects of the spell were always pleasant.

"I am the leopardess," she cooed.

Ngqumbazi always made the strange declaration before love-making. He used to think it was meant to stir his passion — no doubt what she wanted him to think — but it was just part of the spell casting.

Indeed, there was an immediate stirring, but tonight was not the night for coupling. He touched a beaded string on his loin covering and mouthed silent words, "I am the tortoise."

The stirring subsided. It was only a matter of time before Ngqumbazi discovered that he had found a counterspell.

Her words turned curt. "Are you feeling sick?"

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Cetshwayo rubbed his eyes and yawned. "I've felt better."

She pulled his hands away from his eyes. "You look exhausted. Aren't you sleeping well?"

"No. Nightmares."

"Tell me."

He sighed. "The same every night. I'm standing on the ocean's shore in Ombane province and the water turns to blood."

Ngqumbazi shivered and pulled a wool blanket over the both of them. "It could be our enemy's blood."

He helped her with the blanket until they were both snug underneath. "It could be Zulu blood."

"Zulus are used to dying," Ngqumbazi said. "That's what my father used to say."

"I haven't ordered war since I became king."

"But before you were king...."

Cetshwayo shut his eyes, but there was no stopping the memories. No one could be as brutal as his uncle, Shaka. His father had explained that clearly. But one day when he was still a prince, Cetshwayo and his faction....

He turned on his side toward Ngqumbazi, keeping his eyes closed.

Ngqumbazi tugged at his loin covering, but he stopped her. "Before I became king, my men and I slaughtered my brother's faction — twenty thousand dead. A battlefield of slit bellies."

"But if you hadn't...." Ngqumbazi seemed to realize his burden, the weight of his memories. "If you hadn't, your brother would've killed you. It's only a shame that Mbulazi got away."

"It doesn't matter," said Cetshwayo. "He has no more followers, no more cattle."

"I'm sure he's behind this trouble with the British."

Cetshwayo shook his head. "Not him. It's something to do with Sihayo. He sent his brother into Natal to kidnap two of his runaway wives. Then he executed them both for cheating on him."

He felt Ngqumbazi shiver again even though it was quite warm under the blanket.

A flash and crack of thunder caused Cetshwayo to kick off the blanket.

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Ngqumbazi threw her arms around his neck and pinned him back on the mat. "Where do you think you're going?"

Cetshwayo stared at her, not sure if she was joking. "The cattle — "

"Dinuzulu is attending the cattle tonight. I've seen to that too."

"But he's only eleven."

"He's a Zulu prince with a hundred men at his command; I think he'll manage."

Ngqumbazi retrieved the blanket as Cetshwayo settled back onto the mat. There was no fighting it.

He groaned as rain began to pound the roof. "Curse the weather. Either too little water or too much. The drought should've ended us all last year."

Ngqumbazi snuggled back on his chest. "And the rain this year won't stop."

Cetshwayo snorted. "At least the crops look better this year — if they're not drowned."

"Reverend Robertson says water will save us — wash away our sins. He baptized me last month."

He turned his head to look at her. "Learning the white man's religion from the fat parson?"

"What's wrong with that?"

"Well, nothing I suppose." Cetshwayo turned his eyes back toward the roof and grinned. "If you like being preached to by a sinner."

"What's that supposed to mean? What makes you think he's a sinner?"

"John Dunn told me. He said Christians can only have one wife. The fat parson has fifty Zulu wives." Cetshwayo laughed. "And I can't even count his children!"

Ngqumbazi glared. "And how many Zulu wives does John Dunn have?"

"I don't know or care. He's my kind of sinner." Cetshwayo's humor faded. "He's the only white man who understands Zulus, our history, our ways. Do you think the fat parson really cares about us?"

Ngqumbazi paused but then spoke softly. "He disappeared a week ago. Left all his wives and children."

Cetshwayo closed his eyes. "He knows something about the British. He's running for cover."

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More lightning and thunder.

"I don't want to fight the British," he said. "It'll be much worse than fighting the Boers."

Ngqumbazi raised her head. "Hush! You don't want the warriors to think you have weak feet."

Cetshwayo gave an empty laugh. "My own brother tried to assassinate me, and my half-brothers are plotting against me. I lost two food testers last year. No one can call me a coward."

"Why don't you move against Zibhebhu and Hamu — wipe them out?"

"No cause. Not yet, at least. The Great Ones won't support me." Cetshwayo opened his eyes and looked at her. "The British issue comes first. Even my half-brothers know that. There'll be plenty of time for feuds afterward."

Ngqumbazi's eyes softened. "And what do you have time for now?" She touched her anklet again. "I am the leopardess."

Cetshwayo declined the counterspell and smiled. "Blow out the candles."

CETSHWAYO CRADLED his face in his hands. "What does it mean?"

The chiefs and Great Ones crowded in his hut gave no answer. Rain battered the roof.

He looked up and leaned back against a mud wall.

Sihayo shrugged. His ostrich-feather headdress drooped around his eyes, waterlogged by his long march in the rain. "The British think they own everything. What they have is never enough. They always want more. They're as bad as the Boers."

Old Tshingwayo shook his head. He had discarded his headdress and all of his furs in favor of a dry blanket, which he had fully wrapped himself in. Sitting, he looked like a tree stump with a weathered, gray-haired head on top. His only adornment was the head-ring of a married man. "I can understand the Boers. They want land for farming and cattle. The British? I don't know what they hope to gain by bullying the Zulu."

Hamu yawned and scratched his bulging belly. "I'm hungry."

"Meat and millet beer are on the way. Be patient." Cetshwayo realized his half-brother had arrived without his food tester. He could

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poison the fat schemer now and be done with him, but he might need Hamu's warriors if there was a war with the British. His other half-brother, Zibhebhu, was in his province with his warriors awaiting orders — at least he was supposed to be.

Cetshwayo turned back to Tshingwayo. "Tell it again."

The twenty or so chiefs who were visiting during this time of crisis sat along the far wall, Cetshwayo's hut being the only one large enough to accommodate so many. Although not Great Ones, they leaned closer to listen.

Tshingwayo's arm snaked out of his blanket to scratch his head. "We met at the Christian mission across the Tugela River just out of Zululand. John Dunn was there to translate. And the British — some were red soldiers. Others wore..." Tshingwayo paused to form his tongue around foreign words, "...*trousers* and *coats*. Much finer than what the Boers wear. We sat and listened."

The old man stopped as trays were brought in, each bearing its weight in spiced goat meat, sliced melon, and bowls of steaming hot beer.

Sihayo took up the story as they began grabbing food. "At first, it was good news — the Commission ruled in our favor in the border fight with the Boers."

Hamu laughed between gulps of beer. "One thing the British are good for — they can keep the Boers out of Zululand."

"But then came their demands." Sihayo stopped his perusal of the food and looked at Cetshwayo. "Demands from the great white queen."

All stopped eating and stared at Cetshwayo.

He set down his bowl of beer. "And their queen dictates to the Zulu king?"

"Those are their words, not ours," said Tshingwayo.

"And they want cattle?"

Sihayo sneered. "A fine for my brother sneaking into Natal for my two wives. They also want my brother. Ha!"

"You don't have to turn over your brother to the British," said Cetshwayo. "He didn't do anything wrong."

Sihayo turned back to the food tray and mumbled. "Stupid British!"

"And they demand that chiefs carry out no more executions without a trial and an appeal to you," said Tshingwayo.

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Cetshwayo could see several chiefs look up from the feast. He shook his head. "How can I tell a chief what to do in his own province — within his own clan? The British think I'm like Shaka — total rule. Things have changed so much since then."

Tshingwayo nodded. Cetshwayo knew his friend could attest directly to that fact. The old warrior, now Great One, had survived the terror of Shaka fifty years ago and had the scars to prove it.

"And they say you can no longer call together the impi," said Sihayo.

Hamu looked up from a piece of roasted goat. "They would want that, wouldn't they? Forty thousand armed Zulus! They'd drop their rifles and swim home to their great white queen."

They all laughed.

Cetshwayo fell silent. He could not appear weak in front of the Great Ones and chiefs, but war with the British was a deadly way to prove one's bravery.

"To give in is to stop being Zulu," he said.

"To fight is to risk great loss," said Tshingwayo. "Look what the British did to the Gaika, the Gealeka, and the Hottentots. Crushed. They even shoot Bushmen just for sport!"

Hamu dropped his beer bowl with a clatter and turned to Cetshwayo. "They weren't Zulu! The British haven't been in a real fight yet. Let them feel the thrust of the iKlawa and then they'll leave us alone."

"We could just pay the fine," Sihayo said. "Send them the cattle and see if that will suit them."

"Maybe," Tshingwayo said. "Cattle are valuable. It might be enough for them to forget the rest of their demands."

Cetshwayo nodded. "And if we're wrong?"

Hamu leaned back, bracing his bulk on his arms. "If we're wrong we have forty thousand Zulus who will sweep them from the field."

Cetshwayo shook his head. Hamu lacked the experience to see the deadly implications of his words.

Shouting near the hut's entrance caused several of the chiefs to reach for spears. A woman, tall and powerful, leveraged herself into the hut. She was dragging along an Ulundi warrior who had both hands latched onto her arm and was straining to pull her in the opposite direction.

The warrior, his white oxtail necklace half torn off, glanced wide-eyed

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at the assemblage. "Forgive me," he said between labored breaths. "I don't know how this woman got past the other warriors. I'll have her out of here in no time."

Cetshwayo snickered. Despite the warrior's words, the woman was having her way with him. She stood a full head taller, bracing her tree-like frame on legs of sinew and muscle. The copper coils around her arms rang as she yanked the young warrior along. The blue and green bead pattern on her throat collar and hip belt suggested she came from far away, perhaps as far as Msinga. She was fully a woman, with wide hips and breasts as sharp as iKlawa. Cetshwayo guessed her to be nearly thirty years old, although she still wore the small apron of a single girl.

"Cetshwayo." Tshingwayo nudged him and pointed at the woman's headpiece. It was long like flowing hair and drifted down her back and around her shoulders — no doubt ox hair dyed black. It was decorated with hundreds of white beads, making it look like the midnight sky full of stars.

Tshingwayo leaned close and whispered. "A diviner."

There was no such thing as coincidence where diviners were concerned. "Let her go," Cetshwayo said.

The warrior released his weak grip on her arm.

She drew back her hand as if to strike him, sending him whimpering out the hut's door.

Sihayo picked up his iKlawa and pointed it at her. "What's your business? You've got a lot of nerve to interrupt the king and the Great Ones!"

Cetshwayo gathered a more telling view of her as she approached and bent down to her knees. Indeed she was from Msinga, the Umzansi clan, with ostrich egg-sized disks stretching her earlobes wide and beaded ropes for bracelets. A petite pug nose and almond-shaped eyes were also unusual for Zulus. She was beautiful.

She stretched to a belly-crawl, perhaps aware that her life was not her own in this place. "Forgive my rudeness, but it is urgent. I must talk to King Cetshwayo alone."

Cetshwayo resisted the urge to dismiss the Great Ones and chiefs. "What is good for my ears is also good for the ears of all Zulus. What's your name?"

The woman raised her head and studied him for a moment. "Nokukhanya of the Umzansi."

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"You fought well just to have a discussion with me. It must be important."

"The highest importance. The survival of the Zulus."

Hamu gave the diviner a glare and turned to Cetshwayo. "She's nothing more than a witch. You should send her off!"

Cetshwayo regarded the girl. Hamu was right. An ill-omen from a diviner could easily cause fear among the chiefs, especially those who put stock in mysticism. A prediction of great loss might make them hesitant to fight. A vision of victory might make them too eager. Whatever came from this woman's mouth meant losing influence over the Great Ones and chiefs.

"Out with her!" Cetshwayo bellowed.

Hamu leapt to his feet. He had considerably more experience with women than the little warrior the diviner had dragged about. Grabbing her arm and hip belt, he lifted her off the ground and carried her toward the entrance.

She shrieked and fought to look back. "Wait! I beg you for only a moment of your time! I know about your dream of the bloody ocean!"

"Stop!" The dream. Every night Cetshwayo had the same dream. It gnawed at him like a hyena. He had to know.

Hamu had stopped to look back but still held the girl.

Cetshwayo let out a breath. "Release her."

Clearly disappointed, Hamu dropped her and returned to his tray of goat meat.

The diviner crawled toward the group again, apprehension in her eyes. "You are wise to listen to me. War is ahead and Zulus need the blessing of the ancestors."

"What is your name again?" Cetshwayo asked.

"Nokukhanya, my king."

"And what do you know of my dreams?"

Nokukhanya gave a deep smile that caused a chill in Cetshwayo's spine. "An ocean of blood, my king. Caused by British rifles."

Hamu's eyes flashed. "Zulus aren't afraid to die."

Nokukhanya looked at the fat man, but her smile never wavered. "Your blood is in that ocean too, Hamu. As is that of your wives, sons, and daughters."

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Hamu sneered. "Witch lies!"

She turned back to Cetshwayo. "All Zulus."

Hamu's anger seemed overflowing. "So you're saying we should bow down to the British? To a white queen instead of a Zulu king? Abandon our traditions?"

Nokukhanya shook her head. "No. We must fight or something worse will happen — our ancestors will desert us."

Tshingwayo lowered his eyes. "So we're doomed no matter our path. Die in body one way, die in spirit the other."

Again, Nokukhanya shook her head. "There is a third way. A spirit in the shape of a lizard came to me one night and told me of a Zulu who might help."

"Might help?" said Cetshwayo. "I'll order him to help!"

Nokukhanya's grin broadened. "He is from the Cube clan."

"This story gets worse in the telling," said Hamu. "Shaka was never able to defeat the Cube. Cetshwayo has no authority over them."

The woman shrugged. "He's a diviner. He'll help...if the price is right."

Hamu scooted so he could lean back against the wall and folded his arms across his belly. "I knew we'd get to a price at some point."

Sihayo looked at Hamu. "So what if there's a price? If negotiations fail, it'll be war. If magic will help us avoid slaughter, then we should use it."

Hamu gritted his teeth. "It's sorcery! The war doctors will be furious!"

Cetshwayo turned to Tshingwayo. "What do you think, old friend? You must have looked into the face of death a thousand times in your seventy years. What should I do?"

Tshingwayo set down his beer. "I have weak feet when it comes to magic, and I have no doubt that this man she speaks of is a sorcerer, not a diviner." He sighed and pulled his blanket around himself. "But once Shaka ignored a sorcerer who told him to watch for cows with knives, and within a week, Shaka's brothers assassinated him while he was attending the cattle in the Ulundi corral. I advise that we negotiate with both the British and this sorcerer." His eyes narrowed. "And you should call up the impi."

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Cetshwayo glanced around at the other Great Ones. Sihayo nodded. Hamu looked away, but finally nodded too. Several of the chiefs in the back of the room were also nodding, but their agreement was hardly needed.

"So be it." Cetshwayo looked down upon the woman. "And the name of this diviner and his village?"

Still on her belly, she stayed silent.

Cetshwayo fought back a curse. "What's your price?"

She gave him a twisted smile. "I will become your new Right Hand queen, Cetshwayo, and our son will inherit the Zulu throne."

THE IKLAWA BURSTING from the entrance of Cetshwayo's hut was meant for his heart, but it was an unpracticed thrust. He grabbed the wielder's arms and pulled.

Ngqumbazi came spilling out with a cry, tumbling on the worn grass and losing grip of the weapon. She came to a rolling stop on her back.

Her spectacular fall caused a roar of laughter. The break in the rain had beckoned the whole village of Ulundi to venture out for work and play. Scores had witnessed the blundering attack, and the laughter was attracting even more to watch.

Three warriors, decidedly lacking in humor, came running from the corral, but Cetshwayo waved them off.

Ngqumbazi sat up and looked at the surrounding villagers, her mouth gaping. Her searching eyes landed on Cetshwayo, and a scowl took hold. The iKlawa was back in her hands in no time and her second charge was aimed at his chest.

Cetshwayo latched onto the wooden shaft of the iKlawa as he pivoted out of the way. This time, he kept the weapon as she went crashing to the ground.

Howls of laughter filled the village.

Cetshwayo smiled and approached, stopping well out of lunging distance. "You should stab to the belly, not the chest. The belly is harder to defend."

She looked up, grass and mud clinging to her sweaty body. Her face was chiseled hate. "I'll kill you. Sooner or later, I'll kill you!"

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He leaned on the iKlawa. "And disappoint the British? They'll cut off the bead trade, and then what will you do?"

Fat tears leaked from her eyes. "I don't care what happens to me or to you! I won't see *that* woman as your new wife. I won't have another prince competing with Dinuzulu. He's the rightful heir."

Cetshwayo tired of the chattering crowd and sent them off with a shake of the iKlawa. "Dinuzulu is the rightful heir, indeed. He is the oldest and most capable by far."

"But that woman — that witch! She wants to lie by your side in my place as the Right Hand queen. She wants to be the mother of the next king."

Cetshwayo's smile waned. "Who told you that rubbish?"

"Ha! The truth nips at your heels." Ngqumbazi tried to sound triumphant, but there was only pain in her eyes. "Men talk to their wives. Wives talk to each other. Everyone in Ulundi knows the sordid details."

"Then you should know it's unlikely I'll marry her. If negotiations go well with the British, there will be no need to pursue our agreement."

Ngqumbazi's breathing had returned to normal. She stood, inspecting her bruises as she straightened. "And if negotiations fail, you will marry her just for a stray bit of information."

Cetshwayo shrugged. Part of him wanted negotiations to fail. The diviner, Nokukhanya, was beautiful and had a magnificent untouched body. But that was a dangerous wish. Failed negotiations meant a battlefield of dead Zulus — his nightmare of an ocean of blood. "Don't worry. Even if I do marry her and she bears a male child, Dinuzulu will be king long before her child develops a desire to rule."

Ngqumbazi adjusted her beaded cape and apron. "And how did your father become king?"

Cetshwayo bit his cheek.

She looked at him. Her tears had dried, leaving shiny streaks, and cold resignation had chased the pain from her eyes. "Should I remind you?"

"My father, Mpande, killed his half-brother, Dingane, to become king," he said evenly.

"And how did Dingane become king?"

Cetshwayo tightened his grip on the iKlawa. "Dingane and Mpande killed their half-brother, Shaka."

She didn't have to ask the next question. Cetshwayo had become king

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by succession after Mpande died seven years ago, but only after Cetshwayo had done his best to kill his own brother, Mbulazi. The hyenas still picked at the bones of Mbulazi's followers.

"And your own half-brothers plot against you even now," she said.

"They wouldn't! Not now with the British on our border!"

She smiled. "Wouldn't they? You may have exiled Mbulazi, but both Hamu and Zibhebhu covet your throne. Either of them might change sides and join the British. It's not impossible. John Dunn was once your friend, but he took his Zulu retainers across the river into Natal. Now there will be Zulus fighting along with the British."

Cetshwayo picked up the iKlawa and laid it across his shoulders. He had an urge to check the cattle. It soothed him, and they seemed to like it when he recited poetry and painted their faces. He turned and took the path toward the corral.

"At least get rid of the witch!" Ngqumbazi called after him.

He looked over his shoulder. "She could be our savior."

"She's not!" Ngqumbazi's voice had become hoarse. "She's tricking you into this war. She'll bring death to us all!"

Rain fell as if someone had cut the belly of the clouds with a great iKlawa.

Nokukhanya, draped in a blanket, sat next to a village hut that looked over the Ulundi pasture. The hut's sloping roof extended far enough to keep her dry, but it would not last. She would have to get soaked at some point, but by then, greater concerns would occupy her mind. She would once again put her life into the fickle hands of the Zulu king.

The rain could not wash away the stench of ten thousand warriors — the impi. Nokukhanya could scarcely imagine how the pasture held them all, and from her high vantage point, she could see hundreds more snaking through the countryside toward the gathering. The men of the impi had given up on fire, lacking the convenience of shelter, and were trying to escape the rain by sitting with their isiHlangu propped against their backs. Stretched cow hide over a wood frame seemed to work reasonably well as a personal roof. In battle, isiHlangu were even known to serve their actual purpose as shielding against thrown spears. Nokukhanya knew they would be useless against British bullets.

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The warriors of the impi had separated themselves into regiments, each several thousand strong. The distance between the regiments was roughly equal to two set fence posts. Zulus of different provinces stared at each other from across this divide, most with looks of suspicion, some with malevolence. There would be no fighting — not yet. But when the dancing started, along with the singing and boasting, Zulus would spill Zulu blood, and even Cetshwayo would not be able to stop it.

The warriors were not always to blame. In past conflicts, Nokukhanya had seen war doctors use magic to stir their hearts, maddening them to the point of lustful massacre. That was why most tribes feared the Zulu. That was why other tribes no longer existed.

Somewhere in this mass of Zulu steel was the regiment from Nokukhanya's province. Earlier, she had spotted the ear coverings made from green monkey hide that distinguished them. She even thought she had seen some of the young men from the Umzansi corral, her Zulu clan. Their isiHlangu were dyed black with only a few white marks — young and inexperienced. She had seen them tremble, their regiment next to the umCityo regiment with their solid white isiHlangu with rows of black marks — gray-headed with scars. Those Zulus remembered the old days Nokukhanya had heard of only in stories — human gore waist deep, the day the Blood River got its name, the days of Shaka.

Movement between the regiments caught her eye. Three Ulundi warriors were escorting a man up the hill toward her.

She stood and stepped into the rain, keeping the blanket around her shoulders.

The man, perhaps in his forties judging by the slight droop under his eyes and uneven saunter caused by his knotted knees, had a strange face for a Zulu. His eyebrows were thick, his nose squashed, and his skin was as dark as river silt. Nokukhanya wondered if all those of the Cube clan looked like this or if he was an anomaly even among them. The only feature she recognized was the long, beaded hair of a diviner.

She interposed herself in their path, causing them to stop.

The leading warrior clenched his jaw. Nokukhanya had snuck past him a month earlier to see the king. The frightened little warrior in the rear was the one she had dragged into the hut.

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"You know where we're going," said the lead warrior. "Get out of the way."

Nokukhanya smiled. "I'm just going to join you." She fell in beside the man as they started off toward the king's reviewing stand.

The diviner glanced at her. "Who are you?"

"Nokukhanya." She enjoyed the chance to build mystery with short answers. Brevity also created the illusion that she had more influence over the situation than she actually had. In truth, her entire future depended on this stranger. "And what is your name?"

"Umpisana." He studied her more closely, this time staring at her ear disks. "Do those hurt?"

She shrugged. "Did your circumcision hurt?"

He grimaced and looked forward. "I suppose you're behind my being here."

"No. Our departed ancestors are behind it. An animal spirit told me to seek you out."

"To do what?"

"Save the Zulu people."

Umpisana chuckled. "Feeling the blade of the British at your back? Not all Zulus feel the threat. The Cube haven't made enemies of the British. Neither have the Qulsi. Why should we care if the white foreigners put you and your king into their corral?"

Nokukhanya suppressed a glare. "Do you really think the British will leave you alone after they finish with us? Don't be a fool!"

His chuckle died in his throat. "What do you think I can do against the British? There's no magic to stop bullets."

Nokukhanya shrugged. "The spirit didn't say. He just named you and your village. I used my influence with the king and had him send an emissary to bargain with you."

"Fifty head of cattle just to come and listen. I couldn't say no."

She looked at him. "What took you so long to get here?"

"I had to make a trip to Natal."

"Natal? What were you doing there?"

His chuckle returned. "Nervous? Think I'm working for the British?"

"You'd better hope I don't. You're about to appear before the Zulu king."

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Again, his humor failed him and his eyes widened. "I often go to Natal to make purchases. Cetshwayo has complete control of the glass bead trade, so the Cube are forced to travel to Natal."

Nokukhanya pulled the blanket more tightly around her neck and looked away. He was lying. A man of his standing — a diviner — would not bother with such a simple, time-consuming task. He would probably send one of his wives who had a sense for colors and patterns. She wondered if that old Great One, Tshingwayo, had been right in calling him a sorcerer. The rumor was that sorcerers gained their power by sacrificing children. A Zulu child would be unthinkable, but if he knew he was being summoned by the Zulu king, a brief trip to Natal to kidnap a child from another tribe might not be out of the question.

She studied him from the corner of her eye. He was carrying nothing more than a pouch for powders and herbs. "Where are your things?"

"Well outside of Ulundi," he said curtly. "Hidden where no one will find them. No need to carry provisions around all day or however long I'm here."

She glanced over her shoulder at the hills of scrub and trees. Was there a child in the wilderness just outside of Ulundi? What if the hyenas found the child before Umpisana returned? What if the hyenas did not find the child and Umpisana returned for his sacrifice? She had come too far now to get weak feet. If it appeared that she had misled the king and the Great Ones and brought Umpisana here by mistake, she might be the first casualty of the war.

CETSHWAYO SAT on the reviewing stand alongside the Great Ones, three war doctors and twenty chiefs from scattered Zulu clans. Pitiless rain created puddles on the worn earth of the village corral, but the stand's thatch roof kept them dry with the exception of a leak right over Hamu's head. They had worked out their strategy for war with the British in quick fashion — before second meal. However, negotiations for the dancing and singing that was the prelude to war were dragging on well into the latter half of the day. The dour and angry faces surrounding him suggested that negotiations were far from over.

"The umCityo regiment must be nearest the reviewing stand!" shouted one. "We are the oldest!"

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Cetshwayo regarded the speaker. Dabulamanzi had been pressing his argument from the beginning. His warriors made up nearly a quarter of the umCityo, although Cetshwayo was not sure which specific clan Dabulamanzi belonged to. It was hard to tell province and clan without their full battle regalia. Today, all of the chiefs chose a simple married man's head ring and a warm blanket.

All had backed down from Dabulamanzi's claim except for one.

"Ngobamakosi is the oldest regiment."

Cetshwayo recognized the deep, rumbling voice of Mavumengwana. Indeed, he was older, broad of shoulder and well-scarred. Had he any hair left, it would have been gray, though not as gray as Cetshwayo's old friend, Tshingwayo. Mavumengwana might have been old enough to remember Shaka, but he would have been a child at the time.

"You just say that because you're Shaka's old regiment," said Dabulamanzi. "But you've had too many replacements. Your isiHlangu are black and clean, but ours are white and marked."

Cetshwayo jumped to his feet with outstretched arms as the two combatants grabbed for weapons.

"Someone's coming," said one of the war doctors.

The struggling stopped as all eyes turned toward the small procession that approached.

"We'll decide this later," said Cetshwayo. "Here comes the diviner I told you about. Sit."

There were plenty of glares, but everyone sat down on the wooden floor of the reviewing stand.

Ignoring the rain came three warriors surrounding the woman diviner, Nokukhanya, and a stranger wearing a diviner's long headpiece. They stopped before the stand and the warriors dropped to one knee while Nokukhanya prostrated herself on her stomach. The stranger stood.

Cetshwayo leaned forward and smiled. "You're from the Cube, aren't you?"

The man nodded. "My name is Umpisana."

"All of you rise," said Cetshwayo. "Even you, Nokukhanya. No Zulu should bow while a Cube stands."

The guards stood.

Nokukhanya rose only to her knees and maneuvered closer to the

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reviewing stand. "This is the man I told you about. He could be the one who — "

"Shut up, woman!" Cetshwayo shouted. "He may be many things, but I'll decide what use he is to me. And if he fails to live up to your prophecy and I end up fifty head of cattle poorer, I'll stake you out for the lions myself!"

Nokukhanya, shaking, flung herself on her stomach. "Forgive me, Cetshwayo. I'll say nothing more."

Cetshwayo gave her one last glare. When they first had met, he had indulged her rude behavior. Now that the impi was assembled, the chiefs were expecting to see a powerful king, someone who deserved to have their loyalty, someone uncompromising like Shaka.

He turned to Umpisana. "You know war is on the way?"

"More than you know."

Cetshwayo was finding discussions with diviners to be unpleasant at best. "What do you mean by that?"

"I've just been in Natal a week ago," Umpisana said. "The British have thousands of men on the border. There are oxen and wagons, cavalry, even some Zulus and other tribes all preparing to pour over the border."

Umpisana's words set off a wave of muttering from the chiefs. They were ready for war, willing to spill Zulu blood to win recognition for themselves and their clans. Cetshwayo wondered if they would think differently if they knew they were facing annihilation. "You saw this?"

Umpisana nodded. "They're probably crossing the Tugela River as we speak."

Sihayo leaned in and whispered. "At least we know where we stand. Your offer to pay the fine of cattle was not enough, but they won't catch us napping. The British move slowly, even with horses. They have to stay close to their oxen and supplies. If they're crossing, we'll hear it from runners before they make their first camp."

Cetshwayo rubbed his chin and regarded Umpisana. "What were you doing in Natal?"

"All of the Cube must go to Natal to buy glass beads," he said. "Diviners have great need of beads."

Cetshwayo looked at Nokukhanya for confirmation.

She nodded, although her eyes reflected dread.

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He bit back the urge to yell at her again. Instead, he looked at Umpisana and gestured to Nokukhanya. "This diviner had some sort of vision that you might be able to aid us in our war with the British." Cetshwayo waited for a reaction from the diviner. Seeing none, he continued. "While we need no such magic to defeat the British, it could insult our spirit ancestors if I ignore the vision. If you have magic to defeat the British, I'm willing to pay you for it. Certainly with more cattle. I can also offer glass beads in abundance and your choice of girls from the corral — "

Umpisana raised his hand. "The Zulu king is very generous, and I would accept if I could, but I have no magic to defeat the British."

The chiefs' murmurs were anger-filled, except for Hamu who sputtered a laugh.

Nokukhanya leapt to her feet and stared at Umpisana. She turned to Cetshwayo with pleading eyes. "The animal spirit wouldn't lie! He has the power we need!"

Cetshwayo forced a smile to hide his rising panic. He needed just one advantage or strategy or even a trick that would be useful in this war. He needed a way to stop the ocean of blood. "You can think of no magic to help us? A prayer? A charm against bullets? A potion of strength?"

Umpisana shook his head. "Nothing. May I go now?"

Zulus had a tradition of finding creative and painful methods to put people to death. Cetshwayo guessed those methods were somehow reflected in his expression judging by the horror on Nokukhanya's face.

She turned to Umpisana. "Is there nothing you can do? You must have one spell or one skill that no one else has."

Umpisana bit his lower lip in exaggerated thought. "Well, I have one spell, but it's hardly useful in a war."

"What is it?" Nokukhanya asked.

"I can summon Intulo."

At first, Cetshwayo thought Umpisana was joking, but his eyes were steady and his face cold as a snake's heart.

None of the chiefs dared make a sound, not even Hamu. But the war doctors whispered to each other in harsh tones. One of them spoke up. "Summoning the lizard god is not a spell. That's sorcery! An abomination!"

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"Quiet!" Cetshwayo did not have to appease the war doctors like he did the chiefs. They had no power. They would tolerate anything if he paid them in cattle.

Sihayo addressed Umpisana, a slight quiver in his voice. "And what will Intulo do for you?"

"I don't have the power to hold him for very long," Umpisana said. "He usually has the taste for meat — human flesh — so I'm reluctant to use the spell at all."

Cetshwayo leaned forward. "So he will kill at your command?"

"Oh yes." There was a glimmer in the diviner's eyes. "He wants nothing more than to feast on men. I suspect it's a desire residing in him from his days in this world — before he was elevated to the heavens by uKqil."

Sihayo spoke again. "Could he kill an entire army? The British?"

Umpisana shook his head. "No. I once tested his hunger on a Swazi girl we had captured in a raid. As soon as he bit into her head, severing it, the spell was broken and he disappeared."

"Curse!" Cetshwayo liked the idea of sending a god-like creature into the midst of the British and tearing them to shreds. They'd never return to Zululand. But it was not really his power to do so. It was Umpisana's — a Cube. He could certainly imagine the diviner sending Intulo after him and the Zulu impi.

"Maybe there's still a way," Sihayo said, speaking softly to Cetshwayo. "If Intulo could kill but one...."

Cetshwayo nodded and spoke to Umpisana. "Could Intulo be ordered to kill a specific man? The general of the British soldiers?"

Umpisana was silent for a moment, tugging at his potion pouch. "Yes, I think so. He is like uKqil — all-knowing. If I told him to eat the leader of the British soldiers, and those soldiers were nearby for me to point at, I think he could do it. But as soon as he killed the man, he would vanish."

Sihayo snapped his fingers. "That might work. Imagine a creature such as Intulo appearing among them and gobbling down their general. They'd run for home!"

Cetshwayo rested his head on his fists and considered the diviner. It might work. And he'd pay Umpisana well if it did. Not that he would ever

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see the cattle. He could never let a Cube, an enemy, live with that kind of spell.

He glanced at Nokukhanya. She was cowering on her stomach again, no doubt joyous that her life would be spared. He would enjoy fulfilling their arrangement.

She looked up and he nearly gasped. The look of terror was still in her eyes. Why?

"Cetshwayo."

He turned to Hamu.

"If we scare away the British, how will our warriors earn honor in battle?"

"We still have Swazi and Boers to fight," Cetshwayo said.

"But — "

"Quiet! There will be plenty of opportunity to wash your iKlawa in blood. It is the Zulu path. The spirits put this man before me and I will use him. I can afford to anger queens and generals and politicians...but not the spirits!"

The ocean of blood was at his feet again. He had to stop it.

He regarded the diviner. "What price?"

Umpisana answered quickly. "Two hundred and fifty head of cattle and ten virgins."

"Done!" Cetshwayo stood.

"And I'll need a hut here in Ulundi all to myself," Umpisana continued. "And warriors to guard it. My art is secret, and no one must enter. Even if screams are heard from within, no one can ever enter."

Cetshwayo nodded.

"Wait," one of the war doctors spoke up again. "It's easy to brag about spells and walk away with cattle. Let's see proof of your power."

Umpisana looked at the war doctor and spoke through a clenched jaw. "Calling forth Intulo is hardly something I can do on a whim — "

"I knew it!" said another of the war doctors. "You're a fraud! You'll take the king's cattle and disappear!"

Umpisana's eyes widened. "Proof? You demand proof?"

"Perhaps another time — " Cetshwayo began.

"I'll show you proof!" Umpisana bellowed. He pulled a bound and squirming rat from his potion pouch along with a knife. With a quick

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movement, he sliced the rat's throat and flung its blood into the eyes of one of the warriors guarding him.

The warrior dropped his iKlawa and isiHlangu and screamed, putting his hands to his face.

The two other warriors looked at Cetshwayo, but he gave no orders, unable to speak.

Umpisana shouted to the rain-filled heavens. "Spirit of Shaka, hear me!" He approached the still blind warrior and cut two crossing slashes on his chest — not deep enough to kill, but more than adequate to cause blood to drench the front of his body.

Umpisana looked up again. "Speak to us, Shaka! I give you the body of this noble Zulu to receive your spirit!"

"Sorcery, Cetshwayo!" said one of the war doctors. "Stop him!"

But he could not stop him. He was fascinated. Could Umpisana really call the spirit of Shaka? It could be a good omen — the spirit of Shaka blessing the Zulu before the battle. And in front of all of the chiefs to hear it.

"No, not Shaka!"

Cetshwayo looked at Tshingwayo. He had never seen fear on the old man's face before, but he saw it now. His voice was a low tremble, like a last prayer. "Not Shaka. Please don't bring him back."

Umpisana's hand dipped into his pouch again and he withdrew a fistfull of white powder which he threw into the warrior's cuts.

The warrior collapsed and began shaking, foam spilling from his mouth.

"Shaka, we are ready to receive your wisdom! Shaka, reveal yourself!"

The warrior became rigid for a moment and then began to move like an old man rising in the morning. He got up on all fours and studied the ground as if never having seen dirt and mud before.

Umpisana turned to the reviewing stand and extended an arm to the warrior. "Shaka!"

The chiefs shifted. No doubt they had heard the awful stories of Shaka, the king who forged the Zulu empire, but few had any firsthand knowledge. Even Cetshwayo and his half-brothers, Hamu and Zibhebhu, blood relatives of their uncle Shaka, had no memory of him.

Only Tshingwayo remembered those days. The old man now flattened himself on the reviewing stand and whimpered.

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Umpisana turned back to the warrior. "Stand, Shaka. Give us the wisdom of the spirit world."

The warrior turned his head and looked. He braced his arms on the ground and maneuvered his legs underneath him. Once on his feet, he teetered, a scowl carved deep in his face. "Who are you?" he asked, looking at Umpisana.

"I am simply the diviner who called your spirit forth."

"My spirit?" The warrior's eyes gazed around and stopped on the reviewing stand and on Cetshwayo. He squinted as if trying to see through a fog.

"Who are you?" It was said as a demand.

"I'm Cetshwayo." He glanced at Umpisana, but the diviner gave no instructions.

Cetshwayo looked back to Shaka's host. "I am king of Zululand."

The warrior laughed — the kind of laugh that reminded Cetshwayo of a midnight walk in the frigid rain. "Is that a joke? Little Cetshwayo is with his mother somewhere shitting his baby cloth." The warrior's eyes narrowed. "Why are you in the king's place of honor? Why are you in my place?"

Cetshwayo gulped. "Shaka, you died long ago. Only your spirit is here with us now in the body of a warrior."

"Died?" The warrior looked at his hands, turning them about. "I remember being in the corral. Dingane and Mpande were coming at me with knives — "

Cetshwayo had no experience in speaking with spirits, but this was not the conversation he had envisioned. He needed Shaka to give him a blessing from the spirit world.

"Shaka. We will soon fight the British. Before we send you back to our ancestors, will you give us your blessing?"

The warrior looked at Cetshwayo. "Blessing? No blessing. But I'll do better than that. I'll lead the impi in my rightful place! And after I slice open your belly and leave you to the hyenas, I'll hunt down those traitors, Dingane and Mpande!"

Cetshwayo was about to bellow a curse at Umpisana when Tshingwayo let out a shriek. The old man leapt off the reviewing stand, snatched up the fallen iKlawa and plunged it into the warrior's stomach.

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The warrior-host screamed and his legs went limp, but he did not fall. Tshingwayo still held him up by the iKlawa's shaft. He put his weight behind the spear until the steel blade erupted from the warrior's back. He spit in the dying man's face. "Back to the underworld with you, Shaka! Back to the flames!"

At last, Tshingwayo let the warrior drop, blood and bile flowing from his mouth. Before his eyes faded, he rolled his head toward Cetshwayo. "Curse you. Curse you and all who follow you."

I AM THE SNAKE.

Nokukhanya drifted toward a hut on the outskirts of Ulundi. A cloudy night helped hide her, but the rain had stopped so she had to be mindful of the rustle of her beads.

A single warrior stood at the entrance.

She cursed her poor planning. Had she started earlier, she would not have had to contend with a guard. But she could make do, and magic always helped.

Her hand brushed the panel on her hip — blue beads on Gaboon Viper skin.

I am the snake.

She approached the rear of the hut and crept around to the front.

The warrior, a young man from the Ulundi corral, leaned on one of his longer throwing spears. His isiHlangu lay nearby.

She moved closer to the entrance. If the warrior looked to his left, she would be discovered. Magic could not make her invisible. But his lazy glances at the quiet village were not a danger. She was nothing more than a snake sliding silently in the dark.

The warrior sighed and squatted.

Nokukhanya darted through the entrance, hoping his movement would mask her own.

Inside, she held her breath and listened.

Nothing.

She stood for a moment to let her breathing return to normal. She waited for her eyes to adjust to the shadow of the hut, but the weak moonlight leaking in through the entrance was no more than a ghost's breath. She would never see without a candle.

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She began to grope about. A low table dominated the hut and on it, a water jug. There were blankets, candles, empty bowls — enough to make a visitor comfortable.

Nokukhanya lay down next to the wall farthest from the entrance and covered herself with a blanket, making a fold to peek through. If she positioned herself well, it would appear as if someone had merely dropped the blanket on the dirt floor.

She did not have to wait long.

Flickering orange bit away at the moonlight. There was the sound of shuffling and the harsh exchange of words.

Umpisana entered with a reed torch in his hand. The flame drenched the hut in bronze, bringing detail to the furnishings Nokukhanya could identify only by touch before. He went straight to the candles and grabbed a few with his free hand.

Umpisana left but returned moments later without the torch and carrying lit candles, which he placed on the table. He took several more candles, lit them and placed them on the table and around the hut. The burning candles caused the air to grow heavy with the smell of cow dung.

Dull yellow light now filled the hut. Nokukhanya gulped down a shiver. She had not been discovered yet, but that was only a matter of time. Her only hope of escape would be a dash for the door. If she was caught, she would have to fight. Umpisana did not look especially strong — perhaps she could overpower him as she had done the young Ulundi warrior in Cetshwayo's hut.

Umpisana left again and returned carrying a pack by its strap and a rolled up blanket slung over his shoulder. The pack gave a metal clank as it slid from his hand to the floor. He gently lowered the rolled blanket onto the table.

The blanket was bound into a log-shape by twine and bulged on one end, tapering at the other. It was the exact shape of a child.

Nokukhanya bit her lip to keep from yelping. How could she have been so blind?

Umpisana opened his pack and withdrew a roll of black leather, something only white men made. He unrolled it, revealing an assortment of bright steel knives, all with tiny blades the size of crickets. She had seen the like before used by white doctors. They called them scalpels.

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Umpisana picked up one of the knives and studied its keen edge. He reached for his bundled blanket but then wheeled like a buffalo and ripped away her covering.

Nokukhanya could only roll away.

Umpisana followed, knife poised, until she was trapped sitting against the wall.

She screamed to the guard outside. "Ulundi warrior! Help me!"

Umpisana laughed. "Don't you remember my agreement with Cetshwayo? No one may enter, even if they hear screaming coming from within."

Nokukhanya could not tear her eyes away from the scalpel. She once had seen a British doctor use one to peel away skin from a Zulu patient with the ease of a painter's stroke. She touched the snakeskin panel on her hip and looked into Umpisana's cruel eyes. "I am the Gaboon Viper."

His eyes widened and he took a step back.

It was an easy bluff, one he would figure out in no time.

He took another step back, lowered his knife and smiled. "I'm not going to hurt you. I just wanted to scare you. You shouldn't be in here."

Nokukhanya rose, keeping her back against the wall. She eyed the entrance, guessing it would take three full strides to reach it.

But Umpisana seemed to lose interest in her. He put the knife away, knelt and began taking other items from his pack. "What did you hope to find anyway? Or were you just spying on me?"

Her panic ebbed a bit. "I...I wanted to see...." She looked at the bundle on the table.

Umpisana looked up and followed her stare. "Still think I'm a sorcerer?"

She flinched as he picked up the knife again, but he went straight to the bundle. He cut a cord and pulled open the very end of the blanket to expose stripped tree branches. "I need a particular type of wood for my fires. I had to cover them to keep them dry."

Nokukhanya leaned toward the bundle for a better look, but he covered the wood back up.

They could be branches.

"I'm...sorry for mistrusting you." She took a few tentative steps along the wall toward the entrance.

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He ignored her and began unpacking food.

"I heard about your bargain with the king," he said. "You think you can usurp the Right Hand queen and bear the Zulu king's heir?"

Nokukhanya nodded.

Umpisana took a toy-sized red drum out of his pack and set it aside. "I've been thinking; the lizard spirit was wise in having you bring me here. We're in a struggle greater than I first realized. This approaching war is more important than your petty social climbing or Cetshwayo's nightmares."

Nokukhanya had shuffled all the way around the hut and now had her back to the entrance. She could escape at any time. "What's so important about this war?"

He looked down at the toy drum. "It's about stopping all foreign influence in Zululand and even in Natal and Transvaal. It's about saving all of the tribes, not just the Zulus." He looked at her. "Our children are in love with the white man's ways. They're learning English and Dutch. They're becoming Christians. They seek white medicine, not tribal healing." He looked sadly at the drum. "We're dying."

"But I prefer glass beads," she said.

He laughed. "So do I sometimes. But with the Europeans gone, we'll be alive again. I can make that kind of sacrifice."

An ironic choice of words, she thought.

"Umpisana?"

He looked at her.

"I never told you it was a lizard spirit that had visited me."

His eyes flickered for the briefest of moments. "I can summon Intulo, the lizard god. It could only have been a lizard spirit."

"Yes. You're right, of course." She turned to leave.

"Wait."

She looked back.

"I must ask a favor of you. I find that I'm in need of a spirit trap."

"A spirit trap? Why?"

"It's necessary for the summoning spell. I don't have the bead weaving skills to do it myself, and only you have the magic to make one."

"But spirit traps are for the spirits of living humans. What good is one for Intulo?"

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Umpisana turned abrupt. "It just works. I'll worry about Intulo!"

She nodded. "Two days."

"Faster if you can manage." He turned back to his pack.

She gave the bundle on the table one last look. *They might be branches.*

It was a long walk back to the hut Cetshwayo had provided her on the far side of the village. Umpisana had almost bluffed his way out of his lizard spirit slip. The explanation was almost believable. But she had never mentioned anything to him about Cetshwayo's nightmares.

A scream pierced the night, causing Nokukhanya to skid to a halt and hold her breath. It started as a low whine and quickly rose to a feral howl, echoing through the sleeping village. It faded to nothingness, leaving her with cold dread. It was the scream of a child.

"Umpisana!"

Nokukhanya glared at the guard.

He glared back, not allowing her any closer to the hut.

The mind-dulling throb of two hundred drums stopped and the chant of the three thousand warriors from the Ulundi regiment died with it.

"Umpisana!" She could hear her own voice this time, but the ringing in her ears made it seem like a distant call.

Umpisana appeared, scowling. His scowl dissolved when he looked into her face. He came running over. "What is it?"

"War doctors!"

Umpisana started a quick trot across the village toward the pasture.

Nokukhanya ran next to him.

The drums began again and another regiment took up its song. The entire impi was assembled away from the village in the pasture next to the Ulundi corral, but their song was so loud that Umpisana had to yell for Nokukhanya to hear.

"What are they doing?"

"I'm not sure," said Nokukhanya. "They dug a shallow pit and started putting things around it — a broken iKlawa, an old bowl, a beaded collar. I asked an Ulundi woman what they were, and she said they were Shaka's possessions. They bring them out for special ceremonies, but the war doctors got a hold of them and placed them around the pit."

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They passed the last hut in Ulundi and went down the hill that led to the corral and pasture. The impi, twenty thousand warriors strong, stretched before them. The king's reviewing stand was situated at the end of the pasture near the corral.

The impi had transformed from the quiet men sitting under their isiHlangu to escape the rain Nokukhanya had seen three days earlier. They still remained separated into their regiments, but they had replaced their drab head rings and blankets with war regalia. And like their songs and dances, their battlewear was distinctive by regiment. Some wore leopard loin coverings while others preferred otter fur. Feathers of every kind lashed like whips as warriors danced to the drums. All warriors wore flowing ox tails, some around their biceps and knees, others as neck coverings. Officers distinguished themselves with fur capes.

The umCityo regiment was now center focus, singing their war song while dancing with a right-footed double hop and a thrust with the iKlawa. Their isiHlangu waved like great fans, creating a cooling wind throughout the pasture.

The noise was deafening. Nokukhanya wanted to cover her ears, but she needed her hands free to communicate. She tapped Umpisana on the arm and pointed at the reviewing stand. Cetshwayo stood there flanked by the Great Ones and the chiefs, all dressed for war with weapons at their sides. They watched the umCityo regiment perform, their faces as severe as the call for killing in the song.

There was another smaller ceremony occurring next to the reviewing stand.

Nokukhanya and Umpisana moved closer.

Three war doctors in long beaded headdresses, similar to those of diviners, stood near a pit no deeper than a man's arm. They used hands to beat out a lively rhythm on drums tucked under one arm. They chanted, even though their words were lost in the din of the war song. A fourth war doctor was directing a line of warriors along one side of the pit. A warrior walked forward and the war doctor gave him a drink from a cup, which caused him to vomit. The war doctor turned the warrior so that he vomited into the pit. The sick warrior then joined his regiment and another moved up to add his vomit to the pit.

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Umpisana pointed to the war doctors and bellowed at Cetshwayo. "Make them stop!"

There was no way to be heard over the singing and drums. If the king or anyone else on the reviewing stand saw Umpisana gesturing, they ignored him.

Nokukhanya studied Cetshwayo. Aside from his fierce expression, she noticed his eyes were bloodshot and he was not blinking. She grabbed Umpisana's arm and put her lips to his ear. "Watch out! They've been smoking dagga!"

Umpisana pushed her away and walked in front of the reviewing stand waving his hands. Again he yelled and gestured at the war doctors, but he was too far away for Nokukhanya to hear his words.

Cetshwayo's eyes flashed and he bellowed something back.

Umpisana gave no response.

Cetshwayo grabbed a throwing spear from one of the chiefs and lobbed it at the diviner's chest.

Umpisana dived away and the spear buried itself in the muddy earth.

Cetshwayo and the chiefs laughed as Umpisana came running back to Nokukhanya. He stopped next to her and brushed mud off of his body. "He said 'no.'"

Nokukhanya and Umpisana watched as the war doctors ended the procession of warriors. One war doctor jumped into the knee-deep vomit with a rhinoceros-horn ladle while another spread a piece of leather on the ground next to the pit. The war doctor in the pit began to ladle vomit onto the leather.

After several ladle-fulls, the war doctor next to the pit motioned for the first to stop his scooping. He then began to sew the ends of the leather together, trapping the vomit inside. Both ends of a bead rope were attached to the vomit bag.

Nokukhanya felt Umpisana's grip on her arm, and she was pulled back toward the village. By the time they were halfway back to his hut, the noise had diminished to the point where they could carry on a conversation.

"What was that thing?" Nokukhanya asked.

"It's called the 'national ring,'" he said. "It's strange magic — probably the most powerful magic the war doctors have."

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"What does it do?"

"I'm not sure. I've heard of it only in stories. Powerful protection, I know that much."

"Why did you want them to stop?"

Umpisana stopped and turned to her, anger in his eyes. "War doctors are just troublemakers. Schemers. They want to stop me from calling Intulo."

Nokukhanya rattled her head. "I don't understand. How will the national ring stop your spell?"

"It just will! Do you have the spirit trap ready?"

"Yes. But I — "

"Good," he said. "Let's hurry."

They ducked into his hut, which blocked enough noise to allow them to speak without yelling.

Umpisana went to the table where a blanket hid what appeared to be a small body. "You know if we fail, Cetshwayo will kill us both."

She hesitated, staring at the shroud.

"Did you hear me? Your life depends on my success. You know that, don't you?"

She forced herself to look at him. Her voice sounded weak. "I...yes, I understand...but — "

He turned to the table. "This is not the time for weak feet. There's no turning back, and we have to hurry." He pulled the blanket away.

Nokukhanya found herself sitting against the wall, Umpisana shaking her back to wakefulness. Her throat was sore and her chest hurt as if she had screamed out every bit of air in her lungs. A red blotch of a nightmare clung to her — a nightmare about a butcher, but he was not butchering a cow.

Umpisana helped her up and guided her toward the table. Her legs buckled as the reality of the nightmare presented itself. Umpisana caught her and forced her to look. It was a boy, although there was little left to tell. Instead of being butchered open like a cow, his skin had been filleted off, revealing red meat and white tendons. Every bit of skin was gone, even the scalp. It was impossible even to tell if the boy had been native or European.

She choked back her bile and looked closer into his face.

The boy's eyes shifted and looked back.

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Again, she found herself being helped back to her feet.

"You've got to stop fainting. We're in haste."

Nokukhanya fought down a heave in her stomach. "You... mm...monster!"

"Perhaps," he said. "But if this monster fails, we're both dead."

He let her stand, swaying, and walked around the far side of the table where a scalpel sat next to the boy. "Of course, you wouldn't have any appreciation for the art this entails, would you?"

She gawked at him. "Art? The art of torture? The art of keeping someone alive while you remove his skin?"

His face twisted into a snarl. "Yes, art! Finding just the right tools, perfecting the spell, keeping the body moist and free of infection for days. It's pure art."

Hysteria ate at her. "You're insane!"

He sputtered a laugh. "Hardly. The spell is an old one. It's usually done with cattle to summon minor spirits. I discovered it could be used to summon gods. All it required was a young human sacrifice."

"Let him go," she said weakly. "Let him die."

"He's really not suffering anymore," Umpisana said. "The process drives them mad in the early stages. I'm sure his mind is in a happier place. But I hear your plea. We both must hurry. Where is the spirit trap?"

Nokukhanya reached into a pocket in her maiden's apron and pulled it out. It was nothing more than a drawstring pouch covered in green and white beads woven in a wedge pattern. The beads, infused with magic, made it work.

Umpisana grinned at the sight of it. "Cover his nose and mouth with the trap's opening. All I have to do is cut off one remaining patch of skin. The spell will then end and he'll die, releasing his spirit."

She complied. She wondered if the pouch on the boy's body caused him pain, but he gave no reaction. Maybe Umpisana had told the truth and the boy was well away from this world and his horrible ending.

"I'm sorry," she whispered. She struggled not to cry, afraid that her salty tears might hurt him.

"That's right," Umpisana said, looking on. He picked up the scalpel and regarded its edge.

"Why are you in such a hurry?"

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Umpisana's eyes shifted. "He's near death. If he dies, we'll fail and we will both die."

"But you weren't in a hurry when I called you out to see the war doctors."

"Yes I was. The war doctors were more important at the time."

Liar! He mentioned the need for haste only after seeing the national ring — magical protection for Cetshwayo.

Umpisana cut into the boy.

Nokukhanya shuddered as the boy unleashed his last agonized scream. Evidently his mind was not so far gone as to ignore his body's demise. As the boy's eyes closed and his lungs emptied, the spirit bag filled. She drew the strings tight and tied them off.

Umpisana beamed at her. "Success! You've ensured both of our lives. Give me the trap."

For the first time in the day, she had a reason to smile.

Umpisana's smile did not last. "I said, give it to me."

She made a side step toward the entrance.

Umpisana's hand tightened on the scalpel and he leapt across the table at her.

Nokukhanya easily evaded him and ran for the entrance. She turned to face him as he sprawled on the floor. "What's your hurry now? You won't need the trap until you're ready to cast the spell — when you're before the British soldiers. Of course, by then, Cetshwayo will be wearing the national ring, won't he?"

Umpisana pointed the scalpel at her. "Give it to me now or you'll end up like this boy!"

She shivered at the threat but refused to show fear. "I'm not powerless, Umpisana. And even if you find a way to capture me, I'll have hidden the trap so you'll never find it. You'll have to wait for the battle with the British."

She turned and left.

Umpisana bellowed rage from within the hut. The Ulundi guard glanced back at the entrance and then at her as she passed.

Nokukhanya smiled. "Your orders are not to go in, remember?"

Cetshwayo took a drink from the water jug, replaced the stopper and set it aside.

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It was sunny at midday, and plenty of light from the hut's entrance meant they could save the candles — if there were any candles or even huts left when they returned.

"You haven't run with your warriors for twenty years," said Ngqumbazi. She was wearing all of her beaded accessories — cape, head piece, belt and apron, anklets and bracelets. What she could not wear she was tying off in a bundle to carry.

"I'll keep up," he said. "Besides, I won't be the problem. For some reason that woman diviner, Nokukhanya, is coming along." He placed the national ring around his neck and put on his ostrich-feather headdress. "Are my feathers straight?"

Ngqumbazi stood and began fiddling with the feathers, prodding them into place. "Who will lead the buffalo's chest?"

"Tshingwayo."

She stopped fiddling and looked at him. "Tshingwayo is seventy years old!"

"He can run half a day at a near sprint and fight a battle afterward."

She snorted. "His bladder is weak. He'll have to take a dozen breaks before you even reach the British. Who will lead the buffalo's horns?"

"Mavumengwana will lead the left horn. Dabulamanzi, the right."

Ngqumbazi went back to her packing, turning her attention to the leopard furs. "Have those two settled their differences?"

"It doesn't matter. They'll be far away from each other, attacking from opposite sides while Tshingwayo leads the chest straight on."

He picked up his iKlawa and two throwing spears and glanced around. "I must have left my isiHlangu outside."

Ngqumbazi threw down the furs and ran to him, wrapping her arms around him. "I'll never see you again! I've heard there are thousands of British soldiers crossing the Tugela River!"

He hugged her, feeling hot tears on his chest. "We'll win. You'll see."

She pushed herself away. "You still think those two diviners will save us? Look what they've done for you already. After that curse from Shaka's spirit, half the chiefs took their warriors and went home. Instead of forty thousand warriors, you only have twenty thousand!"

Cetshwayo felt his anger rise. "I should've killed that diviner — killed them both!"

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"You still can," she said. "Send warriors and be done with them. They're bad luck."

He shook his head. The diviners were all he had left. If the spell to summon Intulo did not work, the impi would charge into British rifle fire — his nightmare revealed.

He looked at her. "I'm leaving fifty warriors with Dinuzulu. He'll take you and all of the women up into the hills until we return."

"You want her to succeed! You're looking forward to marrying her! I've seen the way you look at her. It's the way you used to look at me!"

Cetshwayo picked up his water jug. "Is it such a bad bargain? If she saves the Zulus the only price is she'll become my wife. And I'll have to pay Umpisana some more cattle, of course."

Ngqumbazi took another step back and, as quick as a snake strike, pulled a knife from her apron.

At first, Cetshwayo thought she was going to attack, but instead, she held it up for him to see.

"Not a bad bargain at all," she said, giving him a heartless smile. "I'll even bless your wedding night. But I swear by my ancestors, I'll kill her the next day!"

CETSHWAYO tossed his headdress and iKlawa aside and crawled up the side of the hill, Tshingwayo close behind.

The rocky bluffs in this part of Zululand were desolate for most of the year, but the heavy rain and yesterday's sun had sprinkled patches of color among the gray rocks. Fragrant wild flowers pushed up from every crevice deep enough to hold a handful of dirt, and grass brushed the hills in soft green.

They reached the top and peered over.

Tshingwayo pointed. "There! With their backs against Isandlwana!"

In the valley was the British army. At least a thousand men milled about feeding cooking fires, tending horses and oxen, pitching tents and cleaning weapons. Indeed, they had chosen to rest at the foot of the butte Tshingwayo had named — Isandlwana. Almost all of the soldiers wore bright jackets, turning the valley into a sea of red.

Tshingwayo used his hand to shield the sun from his eyes. "Something's wrong."

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Cetshwayo studied the British more closely. The oxen-pulled wagons had not been circled around the resting army. The Boers used the defensive circling technique with deadly affect. The British knew this strategy too, but were neglecting it. Were they so confident they thought it unnecessary? Were they so powerful?

One of the closest wagons caught his eye. The oxen had been unhitched and a dozen men surrounded it using planks and branches as levers. The wagon's wheels were half sunk in mud.

Tshingwayo looked at him and grinned. "They're stuck! Who would've thought this rain would be a blessing? The water will save us!"

Cetshwayo nodded at his old friend, but he knew the water would not save them. It was just a wishful thought. British bullets would harvest Zulus like millet.

A column of cavalry broke away from camp riding two abreast. They snaked away, hugging the hills to avoid the muddy flatland.

Cetshwayo shook his head. "Why are they splitting their forces?"

Tshingwayo snapped his fingers. "The spirits favor us. We can forget the diviner and his magic. You should order the attack."

"No."

Tshingwayo hesitated for a moment. "Why not?"

Cetshwayo turned away and sat, looking down the hill. "Bullets, rockets, cannon...."

Tshingwayo sighed and sat next to him. "The warriors have been singing and dancing for three days. You heard the boasting."

Cetshwayo nodded. The boasting had started the first day, and he had been powerless to stop it. An umCityo regimental warrior had approached the reviewing stand and announced he would be the first to kill a British soldier and wear his red jacket. A warrior from the Ngobamakosi regiment strutted forward and said he would break off the strangely bearded jaw of one of the British soldiers and present it to the king.

The first countered that the umCityo were better singers.

The second proclaimed the Ngobamakosi to be better dancers.

Yelling broke out including plenty of pointing and name-calling, but as soon as the accusation of "weak feet" was shouted, weapons were raised.

Thirteen had died before Cetshwayo and the chiefs could restore order.

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"Remember the boasts made," said Tshingwayo. "Honor is at stake."

"I remember," said Cetshwayo. "But they'll follow my orders."

"You'll make yourself vulnerable. Hamu will seize upon their anger and bring war against you. You'll never be safe."

Cetshwayo laughed. "No Zulu is ever truly safe. Except perhaps my exiled brother, Mbulazi, living alone in Natal like a toothless lion."

He stood. "Send a runner. Bring the impi up to the valley on the other side of this hill — absolute silence. And bring the diviners and chiefs to me."

Tshingwayo nodded, scampered down the hill and trotted off.

Cetshwayo peeked over the hill again.

The British almost had one of their wagons free of the mud. He counted twenty still stuck fast.

The enemy had the advantage in pure killing power, but he had an advantage in numbers. He could move twenty thousand Zulus into spear-throwing distance without the British ever knowing.

If the diviner's magic failed, he would attack. The Zulus probably would be slaughtered to the man, but at least they would draw enough blood to earn themselves a name in the list of epic battles the British were so fond of recounting.

Cetshwayo looked from eye to eye: the chiefs; Hamu, his plotting brother; Sihayo, his closest ally; old Tshingwayo; the two diviners. He even spared a glance at the one hundred warriors from the Ngobamakosi regiment who acted as their guard while they were exposed.

The warriors, conspicuous with their leopard headbands decorated with a single red feather, stood rigid, shoulders back and chests forward.

He was king of the impi — king of the Zulus, and even though it was a dangerous thought, he felt he could lead the attack straight into the smoking fire of the British.

By the looks he received in return, they felt it too. Even Hamu's eyes gleamed with pride.

The ocean of blood.

Cetshwayo rattled his head to clear the thought. He would not order the attack, not yet. Not until all was lost and death no longer mattered.

He looked at Tshingwayo. "Where are the war doctors?"

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The old man shrugged. "The diviners would come only if the war doctors stayed behind."

Cetshwayo, jaw clenched, turned toward Nokukhanya.

She shook her head, eyes wide. "Not me — him." She pointed at Umpisana who stood some twenty paces away from her.

Cetshwayo had noticed that the two diviners stayed far apart for the entire trip across Zululand.

Umpisana nodded. "You don't need war doctors. They're just foolish old men full of superstitions."

"I make those decisions!" Cetshwayo pointed his iKlawa at the diviner. "You've been a curse to me ever since you arrived — refusing to bow down, angering Shaka's spirit, screams coming from your hut. If this magic doesn't work, you'll lead the attack with nothing more than your bare hands!"

Umpisana gave a controlled, almost mocking smile. "I assure you, the magic will work to perfection."

Cetshwayo glared at him. "Then do it!"

The diviner glanced about. "Perhaps fewer guards. We don't want to be seen."

Cetshwayo gnawed his lower lip and thought. Once they moved from behind the hill, they would be in view of the British, but they would be so far away, they would probably go unnoticed. Still, fewer numbers would help their need to remain hidden.

He pointed. "Hamu, Sihayo, Tshingwayo and five warriors." He led the way into the open, British soldiers looking like ants with the butte rising above them.

"Hurry." Cetshwayo squatted to lessen his profile as did the others. Only the diviners remained standing.

"The woman will approach," said Umpisana.

Nokukhanya shot Cetshwayo a frightened look before joining Umpisana.

Cetshwayo guessed that Umpisana's refusal to use her name was a result of some sort of rift. They could kill each other for all he cared. That would solve several problems. Just as long as they cast the spell first.

Umpisana pulled a small bound lizard from his pouch, gave it a quick cut and set it on the ground.

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It hissed and thrashed while its blood oozed.

The diviner unslung a drum from his shoulder and began tapping out a quick cadence while circling the lizard in a shuffling dance.

Cetshwayo regarded the British forces again. There was little sign of movement. Even if they were spotted and soldiers were sent to attack, it would be too late. Intulo would rear up among them and devour their general. The rest would flee in terror.

A gasp from Tshingwayo caused Cetshwayo to look back. The tiny lizard had tripled in size, breaking its bonds. It writhed, and its hiss turned into a tortured growl. A bulbous swell grew on its back and when its skin could withstand it no longer, it burst, exposing a glistening, green tube open on its end.

The smell of decay was thick.

The tube, three fists wide and as long as a throwing spear, swayed and pulsated. Cetshwayo, his horror having sucked away his breath, had the impression that the tube was waiting for something, sniffing for it.

"The spirit trap!" Umpisana roared. "Feed it the trap!"

Spirit trap? Cetshwayo forced away his doubts — the screams from Umpisana's tent. He knew there would be a price beyond cattle and girls, but it was worth paying to be rid of the British.

Nokukhanya hesitated, staring at the searching tube.

Umpisana buried a fist in her stomach, sending her to the ground. He snatched a bulging, bead-adorned bag from her hip belt and kicked her over when she tried to rise. He then lobbed the bag into the tube's opening.

There was a popping sound and a few stray beads spewed from the opening.

The speed of the events was confusing, but Cetshwayo was certain he saw the ghostly image of a child's head peeking out of the tube's opening with terrified and pleading eyes. With a whoosh the head was sucked into the tube.

There was a sound of crunching bones and splitting cartilage as the lizard underwent a new change, adding clawed arms, stout legs and a scale-armored backbone. Worst of all was its crocodile head with rows of teeth and maniacal intelligence behind cold eyes.

It stood a full fence post taller than the tallest man Cetshwayo had ever seen.

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Umpisana approached the beast with arms spread. "Intulo. We are honored by your presence."

The lizard god remained motionless, eyes on the diviner.

Cetshwayo noticed Nokukhanya staggering to her feet. She cradled her stomach and coughed.

"Intulo, for appearing at my request, I will give you a gift — fresh human meat. A blood-feast all for you!"

Intulo gave a quick snap of his jaws, sending a shiver up Cetshwayo's back.

Umpisana pointed. "Intulo, I give you Cetshwayo, king of the Zulus!"

"Traitor!" someone shouted — it might have been Sihayo, but Cetshwayo did not have time to think about it. The image of death in the form of the lizard god was stomping toward him. He barely had time to jump and grab his weapons. A few spears from the warriors glanced off Intulo's hide with no effect.

Fear betrayed his legs and he stumbled. But before Intulo could pounce, the national ring, which hung from his neck, burst. What issued forth was not three-day-old stewed vomit, but a midnight mist that swirled before Intulo, stopping his advance.

The mist took the solid form of a Zulu warrior, pure black and featureless like carved stone. It held an iKlawa in one hand and an isiHlangu in the other. On its head was an ostrich-feather headdress, also black and stone-like. Standing as tall as Intulo, it pointed its weapon at the lizard god.

"Kill him!" Umpisana raged. "Kill Cetshwayo!"

Intulo stepped to the side, but the warrior spirit mirrored him.

Umpisana bellowed in pain.

Cetshwayo chanced a look and saw Nokukhanya backing away from Umpisana, a knife in her hand.

Blood flowed from Umpisana's side and he dropped to his knees. "Kill Nokukhanya! Kill the witch!"

Intulo wheeled and sprang toward Nokukhanya.

Cetshwayo turned to his spirit guardian. "Stop him! Kill Intulo!"

But the guardian merely lowered its weapon and stood.

Nokukhanya had no chance for escape. She could not even raise her knife in defense, not that it would have done any good.

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Intulo snapped down, severing her torso from her hips. He then vanished without a sign.

The spirit guardian disappeared with him.

Tshingwayo rushed forward. "Are you hurt?"

Cetshwayo stood and retrieved his iKlawa and isiHlangu. "I'm fine, but it would've been better if Intulo had killed me."

The old man gave him a cross look. "Why do you say that?"

"Now, I will preside over the death of the Zulu people. If any of us survive this battle, we'll be forced to watch the British change our ways, our religion, our rightful place in Africa."

Cetshwayo and Tshingwayo walked over to the others as they raised their iKlawa and surrounded the crawling Umpisana. Two warriors grabbed the diviner and pulled him to his knees.

He looked up at Cetshwayo, blood oozing from his smile.

Cetshwayo resisted the urge to strike. "Who?"

Umpisana coughed a bit. "Why, your brother, Mbulazi of course. He didn't want you to forget about his exile in Natal."

"And you contrived everything? My dreams? Nokukhanya's spirit messenger?"

The diviner nodded. "Everything. And I would've killed you in the village and escaped had Nokukhanya not become suspicious."

Cetshwayo glanced at Nokukhanya. Even with his battle experience, her remains were difficult to look at. "She died to save me — to save the Zulus." He wondered what his wife would say.

"Your end comes either way," said Umpisana. "You've called the impi and now you must fight and die. Your brother hardly cares about the method of your death."

Cetshwayo motioned to Sihayo.

Sihayo thrust his iKlawa down into the diviner's chest and withdrew it in a spout of blood.

The warriors let him fall. The rocky ground would not accept the blood, and it flowed around Cetshwayo's feet like water.

The sound of running caused them all to turn. The other Ngobamakosi regimental warriors were approaching, evidently sensing that something was wrong.

Sihayo waved his arms and shouted. "No! Go back! We'll be seen!"

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Cetshwayo put a hand on Sihayo's shoulder. "It's all right. Now is the time to strike."

He turned to a warrior. "Give the order to Mavumengwana — take the buffalo's left horn and attack south. Dabulamanzi is to lead the buffalo's right horn and attack from the north."

The warrior sprinted off.

Hamu stepped forward. "I have two thousand warriors. Where do you want me?"

Cetshwayo smiled and slapped his half-brother's shoulder. "Join Tshingwayo. He will lead the buffalo's chest."

Hamu smiled in return.

Cetshwayo took strange comfort in Hamu's loyalty. Were these peaceful days, they would be plotting the other's assassination. Now, they would die together on the battlefield.

"Cetshwayo...."

He wheeled, iKlawa raised.

Umpisana, whom he had assumed was dead, was back on his knees, a scowl on his face.

"Cetshwayo. I remember when your mother would suckle you during the reed gathering."

Tshingwayo raised his iKlawa. "Your magic can't keep you alive forever!"

Cetshwayo grabbed the old man's weapon. "It's not Umpisana — it's Shaka!"

Tshingwayo lowered the spear. "Shaka?" Fear infected his voice and it dropped to a whisper. "Not Shaka!"

"Cetshwayo. You're really king of the Zulus?"

Cetshwayo nodded, tight grip on his weapon.

"You want to defeat the British?"

His breath caught in his throat, but he managed a nod again.

"You are attacking with the buffalo charge? The horns on each side and the chest in the middle?"

"Let me kill him, Cetshwayo," said Tshingwayo in a croaking voice. "Let me send him away to the eternal suffering he deserves."

"No, not yet!" He turned to Shaka's host. "Tell me. How do I defeat the British?"

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"Keep three regiments in the buffalo's loins."

"The buffalo's loins?" Cetshwayo slapped his iKlawa against his isiHlangu. "I don't know what that means! Buffalo's loins?"

"Don't be impatient!" Shaka said with a growl. "Keep three regiments behind the chest, not to attack. But they must be the best regiments — the Ngobamakosi, the umCityo and the Ombane."

Tshingwayo turned to Cetshwayo. "Three regiments? They'll go insane with the killing lust! They'll revolt!"

"Tshingwayo? Is that you?"

Tshingwayo looked at Shaka's host, loathing in his eyes. "You have no sway over me anymore. You're a worthless ghost!"

Shaka laughed. "You're old now, but when you struck me down at my first return, your thrust was that of a true Zulu. You will be in command of the buffalo's loins. Order them to turn their backs to the battle so that they will not be enraged by the killing lust. After three charges by the buffalo's chest, let them loose."

Tshingwayo looked at Cetshwayo. "I don't know...."

"Do it, and be quick!" said Cetshwayo. "Pull those regiments and hold them back!"

The old man shook his head, turned and ran off toward the valley where the impi was hidden.

Cetshwayo pointed at Sihayo and Hamu. "You two will lead the buffalo's chest. Bring me back red jackets to prove your victory."

They struck iKlawa against isiHlangu and sped away, taking the warrior guards with them.

Cetshwayo was left alone. He looked at Umpisana — Shaka's host. "You've done it. You'll save the Zulu people."

Umpisana's eyes turned lifeless and his body pitched forward. He slowly rolled to face upward. Shaka's voice was labored and distant. "This is my revenge, you fool. My revenge for the betrayal of your father and his half-brother who assassinated me. You'll defeat the British today, but they'll come back looking for you — looking for revenge — and they'll turn Zululand into an ocean of blood."

At the Battle of Isandlwana, 1879, most in the British invasion force headed for Ulundi were killed, including 800 soldiers, 52 officers and 500

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native allies. Nearly 400 survived by escaping on foot or on horse. An estimated 3000 Zulus of the 20,000 strong impi died.

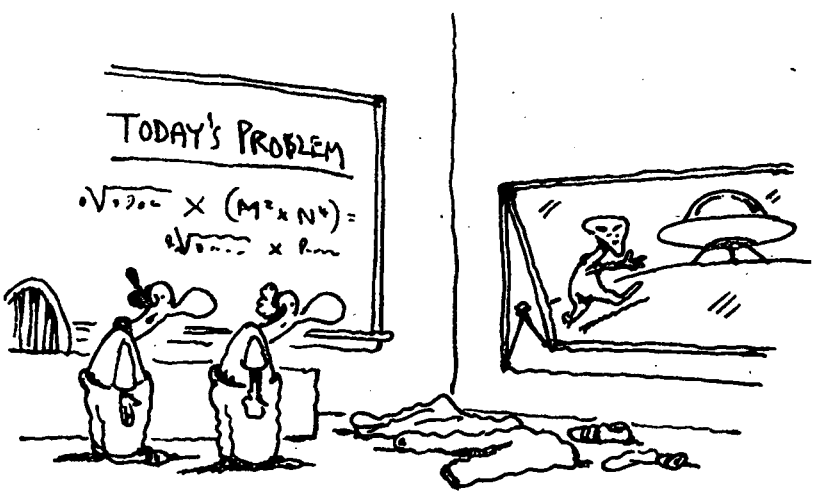
The British learned a costly lesson and became more diligent in encircling their camps with wagons.

The Battle of Isandlwana will always be a part of British military lore. It was one of the last engagements in which the British wore red jackets.

After three more bloody engagements that year, Cetshwayo was captured and exiled to London. He returned to Zululand in 1883 to act as a puppet king for the British, but a rival Zulu clan with the aid of the Boers chased him into hiding. He died in 1884.

Cetshwayo's son, Dinuzulu, inherited the Zulu throne that year.

Shaka, his blood relatives, and their descendants have controlled the Zulu throne from 1781 to the current day. At the writing of this story, Goodwill Zwelethini is king of Zululand, now called KwaZulu-Natal province, part of South Africa. His position is purely ceremonial.



"I always thought those math problems he gave us were way too hard."

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FILMS

LUCIUS SHEPARD

"STAY AWAY! FOR GOD'S SAKE...!"

MOST people, I believe, have had dreams that are more terrifying and more creative than the plots of horror movies. I know this to be true on a selective basis, at least, because I'm writing a series of fantasies based on other people's dreams, and, in process of researching the subject (i.e., letting people tell me their dreams), I've been impressed by the freshness and variety of the materials that have danced across the brains of so-called "non-creative" types. Given that it's the so-called "creative" types who write the screenplays and make the movies, it strikes me as curious that almost nothing new and stimulating and inventive is to be found in the contemporary dark fantasy film. The genre has been boiled down to a few basic plots, the most common of which entails isolating your characters in some atmospheric locale or building, having an evil force pick them off one by one, and, along the way, providing them with enough information so that, perhaps, a couple of them can escape their particular demon/serial killer/predator. I've previously discussed the various wrong-headed logics underlying such reductions (multiple screenwriters; producers who ill-advisedly seek to render a script accessible to the broadest possible spectrum of the populace; etc.), yet it nevertheless seems odd that so little idiosyncratic material finds its way into the final product. Aficionados of the horror film have been conditioned to ratchet down their expectations, to take pleasure in slight variances, in twists, in anything that strays from the formulaic. And thus it was that, on

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learning Marc Forster — the director of *Monster's Ball* and *Finding Neverland*, competent and somewhat idiosyncratic movies both — was preparing to film a dark fantasy entitled *Stay*, featuring Ewan McGregor and Naomi Watts, I could scarcely be blamed for anticipating the result.

Foolish me.

In *Stay*, Sam (McGregor), a Columbia University professor and New York psychiatrist, and Lila (Watts), an artist, are lovers who are in the midst of coping with the aftershocks of her attempted suicide, an ordeal that Sam helped to steer her through. Introduced into this intimate dilemma is Henry Letham (Ryan Gosling), a morbidly inclined young painter for whom ordinary depression is a sunny day; Henry tells Sam that he intends to kill himself in three days, precisely at the stroke of midnight. As Sam makes his accustomed rounds of Brooklyn, playing chess with his blind mentor Leon (Bob Hoskins), attempting to aid his friend and Henry's traumatized former therapist, Beth (Janeane Garofalo), and, eventually, paying an alarming visit to Henry's mother, he comes to realize that his life is intertwined on some deep level with that of his new patient.

Stay is not the typical hymn to incompetence produced by Hollywood — its incompetence is funded by misguided directorial ego more than by the usual culprits — a bloated budget and a fundamental lack of concern for matters of subtlety and taste; nor does it conform to the commonplace plot described above, but rather on a less frequently used yet even more antiquated conceit, one previously put forward by Ambrose Bierce in his story, *An Occurrence at Owl Creek Bridge*. It might be proper etiquette for this revelation to be preceded by a spoiler alert, yet it would be pointless to preserve the movie's purported surprise, since it is so heavily foreshadowed by symbols and tendentious dialogue (including a Shakespeare quote by a side character named for the Greek goddess of wisdom that hamfistedly reveals both plot and theme); the surprise is blown for everyone in the audience, except for pre-schoolers and the terminally obtuse. The movie serves as a souped-up, overly technical framework that masks this hoary twist, like a Ferrari powered by a Model-T engine, and comes off as one of those dreadful student exercises in existential theater that preaches a soul-shattering message such as We Are All Alone or ends

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with an image of ants scurrying over a shinbone, a searing emblem of life's inevitable bleakness. Instead of building on lessons learned from his experience in directing five feature films, Forster — in the service of art, one supposes — has chosen to return to his sophomore year in film school for inspiration and overexposes us to every trick contained in *Film Directing Shot by Shot*. Overlapping dissolves; interruptions of the visual flow; posing dressed-exactly-alike triplets in the backgrounds; shots marred on purpose by out-of-focus objects in the foreground; morphing for morphing's sake; etcetera, etcetera, etcetera. There are so many spiral staircases and Moebius strips in the film, you just know that he recently discovered the work of Escher. Forster can't stop showing off. He's impressed by his technical repertoire, even if the audience is not. The film's strongest moments — as for instance when we see Henry standing by the glass wall of an aquarium, and a sea lion appears out of the murk, attempting to bite off his head — are ruined by Forster's insistence on artistic overkill; in this particular case, he immediately thereafter presents us with a shot of a picture of a sea lion in Lila's studio, turning a powerful image of impending doom into an unintentionally funny bit of pretension.

What's it all mean?

Actually, I understand what most of the symbols mean and what the superfluity of visual gimmickry is intended to convey; I've read some of the same books as Forster, although we've apparently reached different conclusions as to their worth. However, there are several things I don't understand. Like why is Naomi Watts in this movie, when her character serves no purpose? How did Forster, with all that talent and money at his disposal, manage to make such an uninvolving film? And this is the question that plagued me throughout the picture and plagues me still: Why, in every scene, were Ewan MacGregor's pants hiked up so high that his cuffs hung six inches above his ankles, making him look like a tweedy yokel, Huck Finn with leather patches on his elbows? I'm certain there must be a reason, some homage to movies past, perhaps, and if I were able to grasp it, I'm certain it would cast *Stay* in an entirely new, albeit equally loathesome perspective.

Fortunately there are alternatives for the horror fan, ones afflicted by neither pretension nor budget bloat. First up, just out on DVD, we have Dan Mintz's *Cookers*, a nasty little

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low-budget (it makes the *The Blair Witch Project*'s budget seem epic by proportion), three-character movie with a nifty twist on an oft-told tale. A white trash dealer, Hector (Brad Hunt), and his girlfriend, Dorena (Cyia Batten), take refuge in an abandoned farmhouse, led there by a friend, Merle (Patrick McGaw), who lives in the area. Hector has stolen a large quantity of chemicals, which Dorena, his cooker, intends to turn into enough crystal meth to send them on a permanent vacation. As Doreen proceeds to cook up the meth, all three of them indulge and, before long, they're using constantly, staying awake for days at a time, paranoid as rats, squabbling over the pettiest of issues, unable to determine whether or not the things they've begun to see are the product of their tweaking or something more sinister. Demonic presences, perhaps. They're too paranoid to tell one another what they're seeing, for fear the other two will consider them unreliable, and this leads to an ambiguity of resolution that's refreshing in an era when most filmmakers are prone to drive home their intentions with all the delicacy and nuance of a shotgun blast.

The characters' hallucinations are rendered allusively, yet vividly, and the acting — particularly Brad Hunt's sweaty, twitchy, gum-rubbing, uber-paranoid man-with-a-plan — is utterly persuasive. *Cookers* is not without its flaws: the editing style, though appropriately quick and jumpy, is often hard on the eyes, and a couple of the FX shots are substandard. But apart from being one of the most authentic depictions of addiction ever put on film (credit the script by Jack Moore), this is the first movie I've seen in a long while that succeeded in unnerving me. And not by means of jump scares or FX shots, but through a genuine, slowly developing creepiness.

Even creepier is *Soft for Digging*, a movie made for a thesis project by twenty-year-old NYU student J. T. Petty. Shot for six thousand dollars on Super 16, this film is the horror genre stripped down to sinew and bone. The first line of dialogue (a single word, "Murder!") occurs about eighteen minutes into the film, and then, about an hour later, is followed by three lines of exposition...and that's it. There's nothing forced or artificial about the silence, because the film treats of a lonely old man, Virgil (Edmond Mercier), and the silences of his empty existence, of

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water boiling for his morning egg, a squeaking cat toy, coffee perking, the scrape of a chair, the creak of a door. Standing in his long johns on bird-thin legs, Virgil displays every lump and dent of a long hard life and, because we are so focused on him, these imperfections convey a rich emotional context that could not have been achieved through dialog.

When Virgil's cat runs away, he hunts him in a nearby wood and happens upon the murder of a young girl — all he witnesses of it are the murderer's back and two childish legs in tights and black Mary Janes suspended in midair and jerking spasmodically. Unable to persuade the police that a crime has been perpetrated, Virgil sets out to solve the murder and receives help from an unexpected source, the victim herself, who turns out not to be the innocent she appeared. The suspense is heightened by the division of the film into chapters with titles such as "A brief encounter with a strange couple; the occurrence of a horrible thing." And Petty's camera does the rest, utilizing missing frames of action, mysterious pixilated figures, speeded-up film that blurs and perplexes, techniques that translate into jackhammer shocks and assist in the creation of something rarely seen in the genre: an effective and ingeniously devised horror film married to a beautifully observed character sketch, with an ending you will not see coming.

Lastly, we have *The Descent*, a remarkably intense British film due to receive an American theatrical release in late 2005 or early 2006. Directed by Neil Marshall *(Dog Soldiers)*, the picture begins with a rafting expedition that ends in disaster for one of its six women characters, then leaps forward a year in time, allowing both characters and plot to mature over the first half of the movie, all the while maintaining an unrelenting air of menace. Following this hiatus, the women, experienced adventure travelers, descend into a cave system which the leader, Juno, believes to be unexplored (this, by the way, is not to be confused with the crapfest *The Cave*, released earlier in the year). She has misled the others into thinking that the system is well-explored — it's her idea that they need a challenge to reclaim their confidence. Before long, prevented from retracing their steps by a collapsed tunnel, they become lost; not long after that, they discover evidence that men have penetrated the system in centuries past, and they further discover a series of primitive

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cave paintings. The claustrophobic blackness; the silences; the distant noises; and, finally, the terrors that await below...Frodo's journey through the mines of Moria was a Sunday stroll by comparison. Marshall employs his camera to excellent effect, at times using it to quote Frazetta paintings, shots that last no more than an instant, imprinting their savage content almost subliminally, and subsequently causing the screen virtually to explode in a chaos of blood and violence. Natalie Mendoza is a standout as the morally ambiguous Juno, as is Shona MacDonald, as the traumatized Sara. Though Marshall never strays far from the formulaic, he tweaks every aspect sufficiently so that each moment feels fresh, even to a jaded filmgoer. The ending, though it doesn't come as a complete shock, is intelligently achieved, and the last shot, presaging a final descent into madness for one of the expedition, is an absolute stunner.

The rate of universal suckage being what it is, we can't expect too much of the horror genre. Films like *Stay*, like *The Skeleton Key*, and standard-bearers of studio hackdom such as *Bless the Child* will be with us always. But there are some glints in the darkness, some suggestion that better films are on the way...unless, as with the characters in *The Descent*, we have reached a depth where every promising gleam is absorbed into the blackness and proves to have been merely the signal of another gory disappointment.

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A sharp-eyed reader noted recently that Mr. Reed passed a milestone earlier this year when he published his fiftieth story in F&SF. *Story #53 is a good one for citing statistics, as baseball stories are always a good excuse for reveling in stats. Perhaps* F&SF *should launch its own series of player trading cards! If we do, you'll see that Robert Reed bats right, throws right, has an exceptional on-base percentage and his speed on the keyboard is almost unrivaled. And the fun fact is that Mr. Reed is Nebraska's leading science fiction writer. (Readers are encouraged to read this story while chewing a flat, cardboard-like piece of bright pink gum.)*

Starbuck

By Robert Reed

HIS HARD STUFF HAD GONE a little soft and his breaking stuff was staying up in the zone now, and what had been a crisply pitched game for the first eight innings was slowing down by the breath. By the heartbeat. Starbuck walked off the mound and slapped his glove against a thigh, and he wiped his wet forehead with a wet sleeve, then he tucked the glove under an arm while he worked at the new ball with both bare hands, trying to coax life into fingers that insisted on feeling hot needles whenever they touched the world. Jeez, his right hand was a mess, particularly on the blistered middle finger. But he barely noticed that pain, what with the ache of his shoulder and the burning inside what had started the game as a strong sound elbow. Finally, grudgingly, he scaled the mound again and looked at the enemy batter — a skinny little center fielder who could smack a pitched ball in any of a thousand directions — and watched the taped fingers of his catcher, ten layers of code laid over the signal so that the runner standing on second didn't get wind...crap, what pitch did the guy want...? Starbuck just shook him off, forcing him to try again. And

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again, the fingers were talking gibberish. So what could a pitcher do but wave his glove overhead, screaming, "Time out," to the umpire?

The bloodless machine lifted its arms, and a game barely moving suddenly ground to a halt.

Beyond the glare of the lights were more lights, and there were faces and things that would never look like faces, all attached to voices possessing a perfect clarity, and even if a man's ears could somehow ignore what was being shouted at him, there were also the obvious thoughts that no sentient mind could evade — tension and considerable hope, plus a growing, well-deserved impatience.

"Sit him down," said a multitude, voices full of pity and malice.

"No, leave him in," said a smaller multitude, spirits buoyed by the suddenly rich prospects for their own team.

The catcher was a meaty-faced man with garlic on the breath and nearly two decades of experience. He walked like an old catcher, knees complaining. But he had a boy's smile and an unexpected kindness in a voice that was softer than one might expect from that face and that build. "He's going to yank you," the catcher told Starbuck. "You want him to?"

"No."

"Cosgrove's ready."

Starbuck snapped off a few brutal curses. "Cosgrove cost me my last two games. You think I should let him come out here — ?"

"Well then," his catcher interrupted. Then he put his fat glove around his mouth, choking off the garlic stink while asking, "What's your best pitch left?"

"Fastball."

"Well then." With a glance back over his shoulder, the catcher said, "Give him a breaking ball. Put it outside. Can you?"

"Probably."

"After that, start shaking me off."

"Okay."

"And go high with your best fastball. The little shit's going to swing through, and you'll get your first out."

Except it didn't happen that way. The breaking pitch pushed the count to full, but Starbuck didn't get his fastball low enough to entice. Instead, the batter watched it buzz past his eyes, and he took first base at

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a gallop, and now the winning run was on and there were still three outs to earn.

The manager called time.

Where was the stupid resin bag? Starbuck found it hiding behind the mound, and he contented himself for a few moments by banging the bag against his palms and tossing it down before giving it a few good kicks. White dust hung in the air. The manager was crossing the infield, already taking a measure of his pitcher. Starbuck gave him a stare and jutting lower jaw. "I don't want you to pull me," he said with his body, his face. And then he gave the hapless resin bag one more hard kick.

The catcher came out with the manager. Catchers always did that, since they were supposed to be the generals out on the diamond. But there was also a history between Starbuck and this manager, and if you knew enough — and the fans always knew more than enough — you realized the catcher was standing halfway between the men for a reason. These two prideful souls had already suffered more than one flare-up this season. It was smart baseball to have a beefy body at the ready, in case this little meeting on the mound turned into another donnybrook.

The manager began by asking, "What should I do?"

"Don't use Cosgrove," warned Starbuck.

"No?"

"I'll get three outs."

"Tonight?"

"Not with you standing here. But yeah, I will."

The manager nodded, as if he sincerely believed that promise. Then with a strong quiet voice, he said, "Show me your arm."

Starbuck surrendered his right arm into the waiting hands.

The manager was ancient by most measures. The story was that he had played parts of three seasons in the Bigs, but he was too small for the game. So like a lot of idiots in those days, he juiced himself with designer steroids and synthetic growth hormones and enough Ritalin to keep an entire city focused. But the juice could do only so much good and quite a lot of bad. He was finished playing before he was twenty-eight, and after another twenty years of working as a coach in the minor leagues, he started to die. Organs failed. Enzymes went wacky. And weird cancers sprang up in all the embarrassing places.

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Before he was fifty, the old man had been gutted like a brook trout and filled up with new organs either grown in tanks or built from plastic, all back when that kind of work seemed exceptionally modern. But he was still stuck in the minor leagues, working as a batting coach or a scout or sometimes tucked into the front office. It wasn't until he was seventy-two that his career genuinely took off.

In most versions of the story, he was jumping a hooker in Terra Haute, and a pretty important blood vessel in his brain broke. Over the next three days, he died twenty times. Doctors had to do a lot of inspired work just to keep his corpse breathing. How they saved as much of his brain as they did, nobody knew. But what they saved was what was best, and what they built after that more than replaced what he had lost. Once the old guy learned to walk again, and talk, and take care of himself in the bathroom, he went back to managing, and nobody knew how it happened, but the man's new brain had acquired an eerie capacity to absorb a whole lot of factors before gut-feelings took over and made the right call.

"I should pull you," the manager remarked, those strong ageless hands letting go of Starbuck's arm, both men watching it drop, limp and tired. "I really want to drag you out of this game."

His pitcher said nothing.

"But you see Cosgrove standing over there? Glove under his arm?" The manager got a new face before the season. He looked maybe fifty, or at least how fifty used to look. Gray-haired and sun-worn, respectable and wise. He was in control of the world, or so his appearance said. "But the thing is — " he began.

"What?" Starbuck blurted.

"My closer just felt something snap in his shoulder. He isn't telling me, but I'm seeing the readout from the autodoc." Medical telemetry was still legal as long as you weren't actually standing on the playing field. "Cosgrove might think otherwise, but I don't believe he could put the ball over the plate."

The manager's eyes were glass and things fancier than glass, and when they stared, it felt as if knives were burrowing into your flesh.

"On the other hand, you can still put the ball over the plate," he admitted. "On occasion."

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The umpire had rolled out, ready to warn the three of them to break up their little meeting.

"So you're my best hope," the manager said to Starbuck. And on that wilted note of optimism, he turned and walked back toward the dugout.

"Fastballs," the catcher blurted, talking through his glove.

Starbuck gave a little nod.

"And keep them down. All right, kid?"

THE GAME HAD never been larger, at least in terms of crowds and interest and money, as well as the sheer intelligence that was focused on the activities of balls and bats and the boys who played it. But also the game had never been so inconsequential. Tens of millions of fans adored it, yet today the world's citizens numbered in excess of one hundred billion. Truth was, soccer still ruled, with basketball and the UNFL galloping far behind. And while measuring relative values was difficult, baseball was probably only the eighth or ninth most important sport. Excluding golf, of course, which was still nothing but a good walk ruined.

Every sport had its core fans, and among that hardened group were those who liked nothing more than to stand beside their heroes, basking in the fame while they tried to sink their pernicious roots into the players' lives.

Let them get close, and the fans would suck you dry.

Love them, and they would happily ruin your career and good name, and then they'd take home your husk and your bad name as trophies.

That was Starbuck's working premise. Everyone learned which smiles meant trouble and which of the kind words were simply too kind. And sure, every young player was flattered when a pretty creature offered herself and maybe her sister too. What man wouldn't want the adoration and easy sex? But there were rules for players just as there were rules for the world at large, and they were not the same rules, and not knowing the difference was the same as not being able to lay off sliders thrown out of the zone — it kept you in the minors, or it got you kicked out of baseball entirely.

"I love this game," a fan once remarked to Starbuck. "I adore its history and intelligence, and its unpredictability even to the most gifted

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AI modelers." Then with a glass-eyed wink, the mechanical creature added, "But what I like better than anything is the long, honorable tradition of cheating."

Walk away, Starbuck told himself.

But he didn't. He couldn't. It was just the two of them sharing a long elevator ride. The machine was a hotel maid — a neat-freak AI riding inside a clean gray carbon chassis — and like a lot of entities with brainpower in excess of its needs, it invested its free thoughts in the memorization of statistics and the constant replaying of old World Series.

"Cheating," the machine repeated.

Starbuck didn't respond.

"And when I say that word," his companion continued, "I don't mean questionable actions taken by the downtrodden players."

That won a grunted, "Huh?"

"I am referring to the owners," said the maid. "What they have done and are doing and will continue to do with your good game proves that they are cheats, and it makes them into criminals."

That won a sideways glance at his companion, plus a soft, half-interested, "Is that so?"

"Bob Gibson."

The name meant something. It struck a chord with Starbuck. But he had never been the best student, particularly when it came to historical curiosities from more than a century ago. Pretending to recognize the name and its deep significance, he nodded, muttering to the ceiling, "Yeah, what about him?"

"One of the finest seasons for any pitcher in history," the machine continued. "It was 1968 — "

"Sure."

"And do you know what his earned run average was?"

"Not offhand."

"One point one two."

Machines weren't wrong too often, but it could happen. Starbuck was polite enough not to doubt that ridiculously low number openly, and he made a mental note to look up Gibson's career totals when he finally got back to his hotel room.

"The pitcher compiled a record of twenty-two and nine, giving up

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barely more than a single run for every nine innings of work, and because of his utter domination, the mound was lowered next year by a full third."

A visceral anger blossomed in Starbuck.

"The owners want to see offensive numbers," the machine said. And with that, their elevator stopped on a random floor and opened its doors, exposing an empty hallway.

The pause wasn't an accident, Starbuck sensed.

"They want home runs," his companion continued. "They want to see base runners. They believe that there will always be another two or three million eyes that will watch a debased, cheat-enhanced game, while only a few hundred thousand traditional fans will lose interest and drift away." Peculiar as it seemed, a machine was saying, "The owners care only about numbers." Speaking with genuine disgust, it claimed, "For money and the bodies jammed into the stadiums, and for all those paying Web-presences that pretend to sit in the stands, the damned owners will mangle the oldest rules. By any means, at any time."

Because someone needed to say it, Starbuck mentioned, "They have that right. After all, these are their teams."

"But do they own the game itself?"

The question caught him unprepared.

"Ali the Dervish," said the machine.

This one Starbuck knew and knew well. Two generations ago, Ali was the dominating pitcher for six or seven seasons. He was a Sudanese-born fellow nearly seven feet tall, with hands big enough to hold three balls at once and a delivery designed by genetics as well as a god who loves good pitching. Starbuck had studied the old digitals. From the mound, Ali would start to turn and twist, gathering momentum into some type of hidden flywheel set inside his long, surprisingly powerful legs. Then came the rush forward, and a ball that looked like a starved moth was shot from a cannon, and if it was his fastball, the hapless batter had no time to react. If it was the slider, it broke as he swung, making him look foolish. And if it was the change-up — a wondrously treacherous pitch when lumped on top of Ali's other talents — the batter would finish his swing long before the ball hit the catcher's mitt, his poor body screwing itself around as if trying to bring the bat back again, attempting a second swing during the same tortuous motion.

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Ten or twenty times a year, Ali put batters on the disabled list, pulled groins and ravaged backs being the usual culprits.

Just thinking of the carnage made Starbuck laugh.

"Because of Ali, the owners dropped your mound another two inches," the machine reminded him. "And then just to make sure that pitchers learned their lesson, they made the balls a little larger and smoother, and by most measures, a little less likely to break when they were thrown."

"What are we talking about?" Starbuck had to ask.

"Cheating," the machine reminded him.

"But what's this got to do with me?" Then he leaned out of the open elevator, making certain nobody was walking or rolling in their direction. "Unless you can somehow make me into an owner, and then I can change things."

That earned a quiet, quick laugh.

Then the elevator doors pulled shut, and they started climbing again, but more slowly than before.

"Batters cheat too."

"I guess."

"They have holos of every major league pitcher. They'll stand at a practice plate and swing at your best pitches, and your worst, and they eventually learn everything there is to know about your delivery and foibles."

"That's not quite cheating," Starbuck pointed out. "It's awful and I hate it, but it doesn't break any clear rules."

"So batters are scrupulously honest?"

"I didn't say that."

"On your own team," said the maid, "I can think of two or three obvious culprits. Men who are a little too good to be genuine."

"Maybe so."

In theory, if you played baseball, you kept your body in its original state. No artificial parts, no overt enhancements. If an elbow or knee needed repair, the raw materials had to come from your own muscle and tendons. And when those organic fixes didn't work anymore, you came out of the game, or you learned how to hit or pitch in entirely new ways.

But there were certain sluggers who found ways to circumvent all of the careful checks and medical probes that were required of them. Genetic

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doctoring was subtle in one respect, while its results were apocalyptic. A few strands of DNA spread through the corners of a fit body would come to life according to some preprogrammed schedule. For a few hours on each of the season's game days, subtle enzymes emerged from hiding, coaxing key muscles to contract a little faster, clearing the vision in the old-fashioned human eye, and subtly goosing the batter's reaction times.

Their cheating was obvious, and it was ugly. If rain delayed a game by several hours, the biggest sluggers on the team suddenly had slower bats and noticeably less thunder. Of course the owners could have hunted out every criminal. More random tests, less tolerance in the bioassays. But they preferred things exactly as they were, with the occasional public justice for the most inept offenders, everyone else baked into the very profitable cake.

"I love this game," said the gray machine.

"So do I," Starbuck replied, with feeling.

"And I appreciate good pitching," the machine claimed. "Which is why I think so highly of your skills. And your potential too."

"But I won't do that crap," said Starbuck. Though he said it perhaps with less feeling now. "They're always testing us. And worse than that, cheats show easier with pitchers. If I suddenly find another three or four miles an hour on my fastball, they're going to inventory every cell in my damned body."

"Agreed," said his companion.

For the last time, Starbuck asked, "So what are we doing here? What exactly are you trying to sell me?"

"The mind," were the first words offered, followed by the touch of a Teflon hand against Starbuck's temple. "What you know, they cannot inventory. What resides inside this temple...this is what I offer to you, my friend...and for what you would have to agree is an exceptionally modest fee...."

Top of the ninth and bases loaded, with the potential winning run lounging at first, and not a single blessed out showing on the scoreboard. Starbuck took one last walk around the mound, his head dipped forward and eyes narrowed while his soggy brain considered the next few moments. Then he climbed up onto the rubber and looked in at the catcher

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exactly as the umpire bellowed, "Play ball." The enemy batter was the left fielder — a tall rangy kid, a right-hander, and last year's rookie-of-the-year — who wore every bit of armor allowed by the rules and had an irritating habit of laying his bat across the strike zone during the wind-up, as if the pitcher might try to sneak the first pitch past him.

This year and last, Starbuck had gotten the kid to strike out eight or nine times. And eight or nine or maybe ten times, the kid had gotten a hit off him, including one homer — a single shot that didn't matter, since the game was already lost.

But not this time, Starbuck told himself.

He shoved the ball into his glove and the glove back under his right arm again, and in full view of the world, he took a piece of his forearm between his left thumb and forefinger, and he squeezed hard enough that the batter momentarily flinched from the imagined pain.

"I said, 'Play ball,'" the umpire complained.

Which was what he was doing. But Starbuck gave a little nod and got his foot in place, and his back and shoulders aligned, and with a motion practiced until every aspect seemed invisible to him, he threw a fastball that ended up remarkably close to where he was aiming — a point just a few inches south of the batter's exposed chin.

The kid went down in a dusty heap, his helmet careful to stay stuck to his skull.

Starbuck took the throw back from the catcher, and both of the next two pitches caught the outside corner, putting the kid into a nice deep hole.

The last pitch needed preparation. Again, Starbuck took a lengthy break, arm and glove against his ribs while the left hand savagely tugged at the increasingly red skin just below his elbow. The batter watched with interest, and standing on deck, the next batter also stared at the blatant self-abuse. Then Starbuck took the mound and reached deep, gathering up every muscle fiber that hadn't yet been shredded. And with an audible grunt, he sent the pitch high and straight out over the plate, forcing the kid to react too late, swinging just below the ball as it was leaving the strike zone.

The crowd voiced its approval and hinted at its hope. Except for those voices and whistles that came from the out-of-towners, who still had

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plenty of hope, not to mention a small amount of anger for having their kid brushed back.

The next batter was another strong right-hander, an old third baseman with tired legs but thunder in his swing. In six years, he had earned six homers off Starbuck, plus five more round-trippers that were gifts — bad pitches put into awful places directly above the plate. For a moment, Starbuck filled himself with optimistic blandishments. He was older and wiser now, and tonight was different...that sort of claptrap. Then he pinched his forearm again and deciphered the signal from his catcher, and again he pulled together his resources to heave the ball at a point that should have been too high to touch with any bat.

But the trajectory was too flat and too far down, and nine times out of eleven, there should have been a grand slam. Yet sometimes luck is everything, and maybe the batter was a little too keyed up to react. Whatever the reason, the third baseman sent the pitched ball high up into the night sky, and after a week or two, the shortstop caught it in his glove and lobbed it back to Starbuck.

Two out, but the next batter was by far the worst.

The enemy first baseman was a big bullish left-hander, both in build and in personality. For years, rumors had hung around his powerful swift body. If any batter in this league cheated in any important way, he was the culprit. But his power sold tickets, and his arrogance made him enemies who would buy tickets just for the chance to scream at him. He was a broad and gigantic glowering hunk of meat who wore the absolute minimum in armor — a small helmet and one tiny pad on his right elbow — and he stared out at Starbuck while the pitcher again made a show of giving his forearm a hard long pinch.

"Like hell!" the batter screamed.

At that point, the enemy manager popped out of the dugout, and to the umpire, he said, "I protest!"

Man and machine discussed the issue for a few moments. Then both rolled out to the mound, along with the catcher and Starbuck's manager, who was allowed this second visit because this was an official protest. Ten million fans were present in some physical form, watching as the umpire took samples of flesh and blood and hair, both from the pinched-up arm as well as the aching shoulder and both hands. The lab work was

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accomplished inside the umpire's belly, occupying most of ninety seconds, and then the big voice screamed, "No foul. Play ball!"

But the batter didn't agree. With the tact of a landslide, he told the umpire and both managers that this was an injustice. Wasn't it obvious what was happening here? Then he stared out at Starbuck, roaring, "You're not getting away with this, you miserable little prick!"

Starbuck shook off his catcher, again and again.

Finally they settled on a breaking pitch, putting it down near the batter's ankles.

The swing couldn't have been any harder, and every imaginary fastball was smacked out of the park. But not the pitch that Starbuck threw, and now the batter found himself in a quick one-strike hole.

Going back to the well, Starbuck threw a second breaking pitch. And again, the batter swung at phantoms and his own considerable fears.

"Oh and two," the umpire reported.

The batter called for time, and he used his time to stand off to the side, gripping the handle of the bat with both hands, talking to somebody who didn't seem to be paying attention to what he had to say.

When he stepped back into the box, Starbuck stepped off the rubber.

Again, he started to pinch his arm. Then he paused, as if thinking better of it. And showing just the trace of a good confident smile, he brought his forearm up to his mouth and bit down until the flesh was red and bruised, blood starting to ooze from the fresh wound.

The batter screamed with his eyes, his stance.

Then up went the piece of hardened maple, ready for anything that Starbuck might throw.

Again, Starbuck made an inventory of his surviving strengths, and with visible show of concentration and fortitude, he went into his motion and gave a huge wet grunt as he flung the ball, and the batter swung at everything, hitting nothing, while a pitch that would barely serve as a batting practice toss eventually wandered its way over the plate and into the dusty leather mitt.

"I'm not going to ask," the manager promised. He was sitting in his office, swirling a bulb of beer while shaking his plastic face, speaking to

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the floor when he said, "I don't want to know. Not the truth, and not even the lie."

"Well, I want to know," the catcher snapped. He set down his empty bulb and leaned forward, asking, "What is it?"

"What's what?" Starbuck replied.

"You pinch and bite yourself at key points," the catcher explained, "and the pain is the trigger to unlock some deeply buried coordination skills. Stuff you learned once and then hid away. Reflexes your body can't remember until those sharp specific aches cause them to bubble up again."

Starbuck sipped at his own beer, saying nothing.

"I've heard rumors about this trick. Nothing physically changes inside the arm. The muscles are still tired and sorry, which is why nothing shows when they test you."

"Nothing showed," Starbuck reminded both of them.

"But what if you suddenly had a different style of pitching? If your fastball rolled in with a different spin? Or your breaking stuff looked like it came off someone else's arm?"

"Is that what you saw?" Starbuck asked.

"I saw you knock out three tough hitters," the catcher reported. Then he looked at their manager, asking, "Did his stuff look different at the end? From where you were sitting, could you tell?"

A perfect memory was unleashed, and after a thoughtful moment, the manager declared, "I'm not sure."

"Three grown millionaires came to bat," said the catcher, "and you made them look like bush-league fools."

"I did that," Starbuck conceded.

"So I'm asking," the catcher pressed. "What's the story here?"

"It is a story," the pitcher allowed. Then with a smug, somewhat embarrassed smile, he confessed, "I have a friend. A friend living in a different town."

The other men leaned forward, neither breathing now.

"My buddy works at the hotel where most of the teams stay when they come to play. And sometimes, he finds himself riding on the elevator with a slugger or two...and he'll say a few words, in passing...how much he loves the game, and how powerful these gentlemen are, and by the way, did you know that idiot Starbuck is a shameless cheat...?"

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His audience absorbed the words.

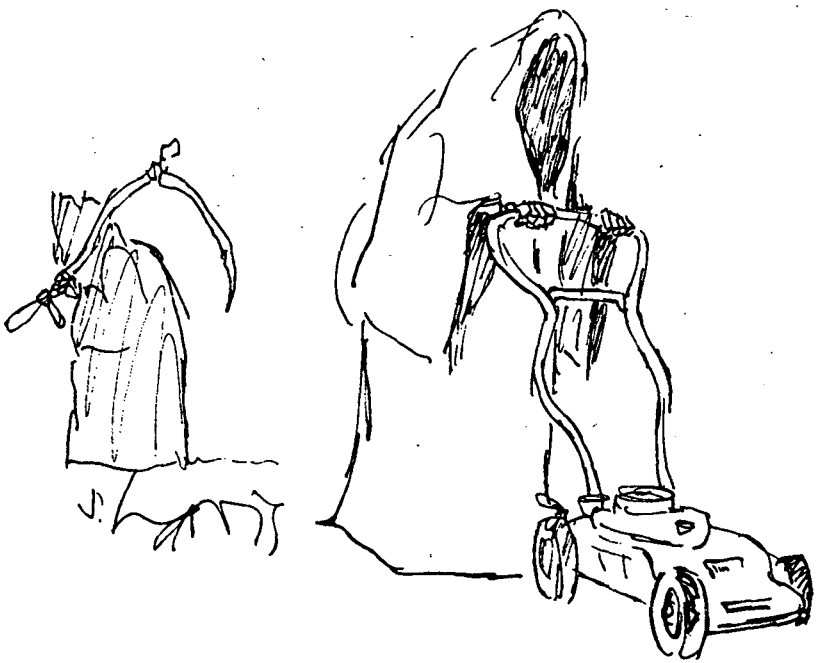
The catcher laughed quietly, saying, "Huh."

The manager shook his head and sipped his beer. "So are you or aren't you?"

"Cheating?" Starbuck shook his head, admitting, "Not really. No."

"Is this buried reflex thing even possible?" the manager wanted to know.

Then Starbuck was laughing. "Oh, there's a buried reflex, all right. And by pinching and biting myself, I trigger it. But the reflex isn't hiding inside my nervous system. It's inside theirs. My friend tells them that I cheat, and so they're looking for a pitch they've never seen before. At least from me, they haven't seen it." He was laughing louder now, rubbing hard at his broken-down arm. "What they're reacting to is just an idea that was set inside them...implanted against their will...put there by a few words thrown their way during a long, long elevator ride."



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Bruce McAllister published his first story in 1963 and he made his first appearance in our pages in the April 1968 issue. He is the author of two novels, Humanity Prime *and* Dream Baby. *During the 1990s, we didn't hear much from him, but in recent years he has been very productive, with stories appearing in* Asimov's, Sci Fiction, *not to mention "Hero: The Movie" and "The Boy in Zaquitos" in recent issues of ours. He says he's working on a YA novel,* The Dragons of Como. *His new one is a disquieting tale of what might have been (and what may yet still be).*

Cold War

By Bruce McAllister

During those decades we never really knew who was watching.
—Admiral William "Billy" Brandicoff, 1918-2000

ONE NIGHT WHEN I WAS TEN, too grown-up to sit between my mother and father in the front seat anymore, my dad put us in the car at our house on San Diego Bay and began to drive through the night into the northern part of the county and its vast scrub-brush emptiness.

My father was executive officer of the Navy laboratory high up on the peninsula, where civilian scientists with top-secret clearances did their experiments day and night, though he'd never taken us there. It was classified and he couldn't. But tonight, even if he wasn't wearing his uniform, he was taking us somewhere, somewhere that felt secret.

He didn't say a thing as we drove. He didn't say, "I've got a surprise for you two," or "This is going to be a long drive, but I think it'll be worth it." He just drove while my mother told him about what the other wives were doing for the Christmas dinner at the yacht club and how well I was

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doing in science and social studies, and, well, yes, a little less well in math.

I don't remember whether we passed through a military gate. If we did, it was a simple one, barely there, where a Marine guard in a booth, seeing the sticker on our car, saluted crisply, clicked his heels, as they all did, and said, "Good evening, Sir." It wasn't heavy security or I'd remember that. It was just an endless training base somewhere in the northern part of the county where, in the moonlight, my father drove and drove and my mother and I tried to stay awake.

At one point we passed — I remember this — some barracks where moths and other bugs beat themselves silly against the rafter lights, and a soldier, just one, lit a cigarette, paying no attention to the insects or us. But after those barracks the endless chaparral just became more endless. I fell asleep, and I know my mother did too because she stopped talking — something that was, as my uncles used to say with affection, "a very rare thing."

When the road turned bumpy, I woke up, sat up, and we were on a dirt road. In the distance ahead was a single yellowish light, the kind you always see on country roads, wondering who lives there and what they're doing and whether they would ask you in if your car broke down. In that light there were people, I always told myself; people different from me, but still people, and wasn't it an amazing thing, there in the darkness, miles from anywhere, a light that told the universe there were human beings there?

When my father slowed at last, the light became a shack — the kind you'd imagine cowboys or sheep-herders would live in, except for a bunch of antennas on its roof — and we stopped. My father still said nothing. My mother was awake now, too, and we got out.

At the door of the shack a man in civilian clothes — a red cowboy shirt and jeans (I remember that, too) — held the screen door for us as we went in, and he said, "Good to see you, Captain. Good to see you, too, Ma'am," while my parents said the same, I'm sure.

There was a table in the corner, under three bare light bulbs, and on the table was a machine of some kind — a machine with needles, the kind you'd use to measure the waves of your brain — and I remember looking from my dad to the man in jeans, waiting for someone to say what the machine was, though no one did.

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I don't know how I got close enough to see what the needles were doing, but I did. Maybe my dad pushed me closer. Maybe the man in jeans waved for me to step in. That's the kind of thing memory often leaves out, though supposedly it's all still deep inside us, should we ever need it. I don't need it yet, I guess. All I really need to remember, to remember that night, is that I stood close enough to see the needles scratching rhythmically with their black ink while somewhere my mother and father watched too.

We watched and waited, and no one said a thing. And then the needles jumped suddenly, scratching furiously, and the man, who was somehow sitting at the table beside me now, looked around at my father and said, "This is it."

"Sputnik," my father said, and I jumped at his voice. It was the first word he'd spoken all night — at least that's how it felt — and he was looking at both of us, my mom and me, as he said it. "It's overhead," he was saying. "Right now — isn't that right?"

The man in jeans nodded, his eyes on the ink.

"The Russians are watching us," my dad said.

I remember thinking: *This is what matters*. Not that the Russians were watching; and not that they could do this, my father and the civilian scientists he oversaw at the lab high on the Point — listening to it with needles and ink; but that it was over us at that very moment, that it was up there somewhere in the night beyond the ceiling, a light no brighter than many stars, but moving across the sky and as much of a miracle.

My mother started to say something — to ask a question maybe — but didn't, as if she were seeing it too: *what* really *mattered*.

"Every night?" my father asked.

"Yes, Captain," the man said. "Remarkable, isn't it."

"Yes. Doesn't seem possible."

"No, Sir, it doesn't."

We stared at the needles, listened to them quiet down, and seemed to be waiting. For what? I wondered. The satellite would not come around again for a long time, would it?

Then the furious scratching started up again, much louder this time, and I knew this sound was what we'd been waiting for. My father leaned in, as if the sudden shadow of ink on the long, endless paper that folded and

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folded again on the floor as it left the machine, would tell him what was above us now, even as the man in jeans made room for him, moving his chair, my father saying, "It's bigger tonight."

"No. It's just sending out more, Sir."

"More what?"

"Light — a kind of light...."

"One we can't see."

"Right."

My father nodded once — I remember that — and was silent again, and we all watched the paper turn black from the sudden bursts, as if a long finger, maybe God's, were reaching down from the night sky to touch the table before us.

"Do you see it?" my father asked me.

"Yes, Dad."

"Do *you*?" he asked my mother, who nodded, saying, "It's louder."

"Yes, it is," he said.

My dad nodded again, and I could tell it was time to go. He and the man shook hands. "Great work, Gary," my dad said. The man complimented my mother on something she was wearing — they'd met before, I realized — and we walked to the screen door. I didn't want to leave. I could have stayed in the shack with the machine all night, waiting and watching.

I REMEMBER THIS, too: looking through the rear windshield of our Chevrolet, watching the yellow light of the shack getting smaller behind us in the dark, and for a moment the little light seeming to brighten, seeming to rush at us like a voice, a presence as big as space itself, hoping to tell us something, but then it was quiet again, only the twinkling nursery-rhyme stars above us in the night as my mother said, "That was fascinating, Jimmie." Then, as if time and space were caught in a stutter and we were caught in it, she repeated it: "That was fascinating, Jimmie." "That was fascinating, Jimmie," she said a third time, and I could hear in her voice that she wanted to break free, but couldn't.

After a while — an hour maybe, maybe more — when I was still watching the road behind us and still shaking, though the voice and the

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light were gone — my father said quietly, "I — I wanted you both to see it."

"Yes," my mother answered, and I said something too, our voices unsteady. Maybe it was to thank him. I don't know exactly what we said, but I'm sure we thanked him.

"Will they ever know what it is?" my mother asked, just once.

My father didn't answer. He was breathing hard — I remember this now — I remember thinking how strange it was — and he wasn't blinking. He was driving but not blinking. When he did speak, when he could speak, his voice was hoarse — I remember this, too — and it was to say, "I don't think so. It comes when it wants and it goes when it wants, Dorothy. It's big and it's got its own kind of light."

But he wasn't thinking of its light, I knew. None of us were. We were thinking of the *ink*, there on the endless sheet of paper, the only thing we could really be sure of, the only thing we'd later claim we remembered, though somewhere inside us we would hear the voice and remember *everything*, and it would make us shake.

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SCIENCE

PAT MURPHY & PAUL DOHERTY

WEIRDER THAN YOU THINK

IN 1905, Albert Einstein published a paper that described his special theory of relativity for the first time. That theory, condensed to its essence, is this: Space and time are not two separate things. They are two parts of the same thing: spacetime.

One consequence of special relativity is that your motion through space is linked to your motion through time. The faster your spaceship moves, the more slowly the clock on your spaceship moves compared to a clock on Earth. This apparent slowing of a fast-moving clock is known as *time dilation.*

In the hundred years that have passed since Einstein published his theory, science fiction writers have had a great time exploring ways in which time dilation might affect space travelers. Maybe you've read Robert Heinlein's novel, *Time for the Stars,* a classic case of what physicists call the "twin paradox." In *Time for the Stars,* one twin travels to distant planets at near-light speed. He returns to Earth to find that his twin has become old (and rather cranky) while he was gone. Or perhaps you've read Joe Haldeman's *Forever War,* in which soldiers repeatedly travel long distances at near-light speed, returning from each interstellar journey to a human society that is transformed, centuries having passed on Earth while the soldiers were gone. Or you may have read one of the many other works of science fiction that include relativistic effects.

These works explore possible consequences of time dilation. But they never explain why the folks on the spaceship age more slowly than the folks on Earth. That's where we come in.

In this column, we will get into the nitty gritty details of time dilation. And, since we know you won't

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take our word for it, we'll offer actual proof of Einstein's theory. We will stretch your mind with some thought experiments and show you how to derive the equation that lets you calculate how much time shifts with speed. We won't have space to explore all the other weird consequences of special relativity. We'll have to save that for the two-hundredth anniversary.

Experimenting with Relativity

At the Exploratorium, we always like to start with an experiment. So if you have Internet access, we suggest you start by taking a little virtual trip. Visit *http://www.exploratorium.edu/relativity/index.html*, the Web site that the Exploratorium created to celebrate the hundredth anniversary of Einstein's paper. At this Web site, you can blast off to the stars — to Epsilon Eridani, to be precise, a star that's ten light-years from Earth.

Since you're a science fiction reader, we probably don't need to remind you that a light-year is the distance that light travels in a year. And we also don't have to tell you that light travels at about 186,000 miles or 300,000 kilometers in a second. So a light-year is a long, long way (about 10^{16} meters).

Here's the story: Twenty years from now, the Exploratorium will be hosting a party on a planet orbiting Epsilon Eridani. The goal of your virtual trip is to get to the party on time. You can choose your speed of travel — and note the relativistic effects while you travel. If you've ever wanted to blast off to a distant planet, here's your chance! It's a virtual trip, but given the limitations of our budget, we think that's still pretty good.

Blast off to the stars, then come back and read on. If you don't have Internet access, just read on. You can read and enjoy the article even if you never visit the Web site.

Thinking like Einstein, Part One

Before we start detailing the weirdness, we want to give you a better handle on the theory itself. Einstein started with a couple of basic assumptions. First, Einstein assumed that Galileo was right. Back in the 1600s, Galileo proposed that the laws of physics don't depend on the speed you are traveling. As long as you are traveling at a constant speed, the laws of physics are the same.

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Suppose you're in a vehicle that's closed up — the doors are shut, the windows are blacked out, and you have no way to see the outside world. How can you tell whether you're sitting still or hurtling along in a straight line at a steady 100 kilometers an hour?

According to physicists, you can't.

In a closed vehicle, there is no experiment you can do to figure out whether you're standing still or moving at a constant velocity (that is, in a straight line and at a constant speed). Pour water into a glass, bounce a ball, swing a pendulum — do any experiment you can imagine. The laws of physics that dictate how liquids pour, balls bounce, and pendulums swing are the same at all constant velocities, whether you're moving at zero kilometers per second, 100 kilometers per second, or nearly the speed of light.

If the vehicle you're in speeds up, slows down, or turns, you can detect the change. But as long as the vehicle is moving in a straight line at a steady velocity, there's no way you can tell.

Physicists call the place from which motion is measured a "frame of reference." As a physicist might put it, "all laws of physics are the same in all uniformly moving frames of reference." This assumption is called Galilean relativity, and it's fundamental to Einstein's special theory of relativity.

Thinking like Einstein, Part Two

Before we get to the weirdness of interstellar travel, there's one more assumption we need to consider. Einstein assumed that the speed of light is the same for all observers.

Ordinarily, when you talk about how fast something's moving, you have to take note of where you're standing as you watch that motion. Suppose you're on a train traveling 100 kilometers per hour. You decide to get out of your seat and walk toward the dining car at the front of the train, so you amble up the aisle at a speed of two kilometers per hour. How fast are you moving?

Before you can answer that question, you need to ask another question: How fast am I moving relative to *what*? Relative to your seat on the train, you're moving 2 kilometers per hour. But relative to the track under the train, you're moving 102 kilometers per hour — the speed of the train plus your speed on the train.

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That's the way it works for most things. But that's not how it works for light.

Back in 1887, physicists A. A. Michelson and E. W. Morley did an experiment that showed the speed of light does not depend on the movement of the observer. Michelson and Morley were trying to measure the speed of the Earth as it passed through the aether.

The aether, for those of you who have forgotten, is the undetectable stuff that nineteenth-century scientists supposed carried light through space. Back then, they figured that light had to travel through some kind of substance. After all, ocean waves travel in water; sound waves travel in air or water or some other substance. It seemed natural that light waves needed something to propagate through. Scientists subsequently discovered that light is weirder than they thought. There is no aether, and light travels through empty space unaided by any aether.

Anyway, Michelson and Morley came up with a way to measure the speed of light in the direction of Earth's motion and at right angles to Earth's motion. If light behaved like most things, those two speeds would have been different. If you're in a sailboat traveling into the waves, the wave speed relative to you is greater than if you are in the same boat traveling in the same direction as the waves or traveling at right angles to the wave's direction of travel.

Michelson and Morley wanted to calculate the difference between the speeds of light in these two directions. They planned to use the difference to calculate the speed of the Earth. But they were surprised to discover that there was no difference! The speed of light — measured in the direction of Earth's motion and at right angles to Earth's motion — was the same. The bottom line is: No matter how fast or slow you move, light always moves at the same speed.

Imagine, for instance, that Marco is on a spaceship traveling toward the sun at 99.99 percent of the speed of light, and Sophia is on a spaceship heading away from the sun at 99.99 percent of the speed of light. Even though they're heading in different directions, sunlight is rushing past them both. How fast is that light traveling relative to Marco? It's traveling at the speed of light — about 300,000 kilometers per second. How fast is that light traveling relative to Sophia? It's traveling at the speed of light — about 300,000 kilometers per second.

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Or suppose you are driving a fast car at just a meter per minute below the speed of light. (It's a *very* fast car.) You turn on your headlights. Do you see the light moving slowly away from you at just a meter a minute?

Nope. The speed of light is the same for all observers, no matter how fast they are traveling. The light from your headlights always rushes away from you at 300,000 kilometers a second.

You're skeptical? Experiments have shown that the speed of light is independent of the source of the light. Back in 1964, T. Alvager measured the speed of a pulse of light emitted by a neutral pion (that's a subatomic particle) that was traveling at 99.975 percent of the speed of light. He found out that light traveling in the same direction as the pion was traveling at the speed of light.

It's About Time!

Now that we've dealt with Einstein's basic assumptions, we can get to what you've all been waiting for: the really weird stuff. Let's talk about what happens when you blast off at near light speed. Suppose, for example, you travel a distance of ten light-years at ninety percent the speed of light.

As we noted up front, the faster your ship moves, the more slowly your ship's clock moves compared to a clock on Earth. And the more slowly you age, compared to your twin back on Earth.

Here's one way to think about it: You are always traveling through spacetime. Even when you're standing still, you're traveling through time — at a rate of twenty-four hours a day. When you also travel through space, you travel through time a little bit slower. Thomas Humphrey, one of the Exploratorium's physicists, explains this as a trade-off: In order to travel through space, you have to give up a bit of your travel through time.

If you think about it, you'll realize that this sort of trade-off happens all the time in your travel through space. Suppose you leave San Francisco's Ferry building on a ferry that travels at ten knots. (We're assuming that this ferry always travels at exactly ten knots.) You could travel east at ten knots to Oakland or you could travel north at ten knots to Sausalito. When you travel due north, your speed eastward is zero. When you travel due east, your speed northward is zero. When you travel due northeast, your eastward rate of speed is reduced to allow

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some northward progress and your northward rate of speed is reduced to allow some eastward progress. Your speed will be 7 knots east and 7 knots north. If you graphed the distance you traveled in an hour, you will always end up on a circle of radius ten nautical miles, but where you are on that circle varies depending on your direction. (Take a look at figure 1 to see see what we mean.)

A similar rule applies to space and time! When you travel through space, your passage through time slows down. At ordinary speeds, this slowing is imperceptible (except to a superaccurate clock). But as you approach the speed of light, your clocks slow down to a stop. Just as when the ferry goes almost due north, its eastward speed approaches zero.

Where's the Proof?

Maybe you're skeptical about all this. You want proof? Well, it just so happens we've got proof. Evidence from two different experiments support the existence of time dilation.

The first experiment is Pat's favorite. How can you prove that a fast-moving clock runs more slowly than a stationary one? You could send a very accurate clock on a long journey.

In October 1971, two physicists flew four atomic clocks on commercial airliners twice around

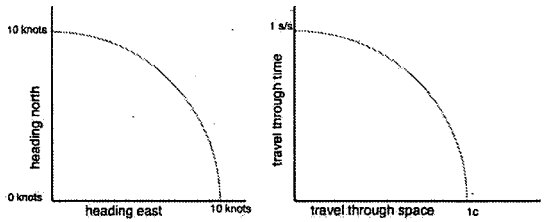

Figure 1.

The left graph shows the situation when you are traveling in a direction between north and east on a ferry that moves at 10 knots. Your speed is always on the arc. Traveling faster to the north means giving up some speed in the eastward direction.

The right graph shows the trade-off between travel through space and travel through time. Your travel through space is measured in fractions of the speed of light, or c. When your speed is 0, you travel through time at the usual rate: One second for you equals one second measured by someone standing still. At 1c, the speed of light, your travel through time stops. Zero seconds pass for you for each second that passes for someone standing still.

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the world, once in an easterly direction, and once in a westerly direction. These clocks were accurate to within a few nanoseconds. (That's mighty accurate since there are 1,000,000,000 nanoseconds in a second.) Using calculations from the special theory of relativity, the physicists predicted how time measured by the clocks on the planes would differ from time measured by clocks on the ground. What do you know! The experimental results matched the predictions, confirming that time dilation actually does take place with real clocks.

In 1975, physicists tried another experiment. They sent an atomic clock up in a U.S. Navy plane that traveled for 15 hours at 270 knots, or 140 meters per second — about 0.47 millionths the speed of light. As the plane flew back and forth over Chesapeake Bay, the onboard clock was compared to a clock on the ground by laser signal. During the flight, the onboard clock lost 5.6 nanoseconds, exactly the amount predicted by special relativity.

Those who read this column regularly are not surprised. Those faithful readers remember that we mentioned in an earlier column that special relativity is essential to the functioning of the GPS satellite system. The atomic clocks on the satellites run slow due to special relativity because the satellites are whizzing around the Earth in orbit. (They also run fast due to general relativity, but we're not dealing with that theory here. One thing at a time!)

So whenever you fly in a jet, you age a tiny bit more slowly than you would have if you'd stayed put. Check out the Exploratorium's "frequent flier seconds" calculator at *http://www.exploratorium.edu/relativity/time_games.html*. Enter your lifetime frequent flier mileage, and the calculator will tell you how many nanoseconds younger you are as a result. If you've flown 500,000 miles, you will have aged 1100 nanoseconds less than Earth-bound observers.

Other evidence for special relativity comes from the subatomic particle called the muon, a particle that lives for just 2.2 microseconds. Muons are created when cosmic rays traveling through space strike molecules in the upper reaches of the atmosphere, some ten kilometers above Earth's surface. Even moving at nearly the speed of light, a muon should only be able to travel about 700 meters before it decays. So you might think no muons could ever reach Earth.

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Not so! Many muons make the entire ten-kilometer trip. From the perspective of the Earth, these high-speed particles live ten times longer than they would if they were stationary, and consequently, they can travel ten times farther.

In 1966, physicists at CERN — the world's largest particle physics facility — repeated this natural occurrence in a laboratory. They created muons and sent them zooming around a ring at 0.997 times the speed of light. Those high-speed muons survived twelve times longer than did muons at rest.

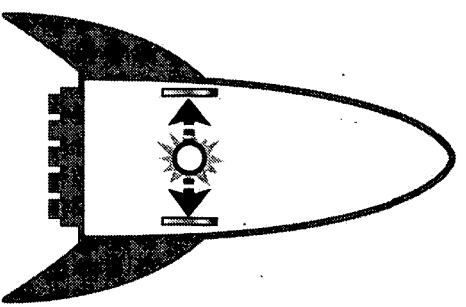
(By the way, if you have a classic thermos bottle with a silvery inside you can "see" these muons. Fill the thermos with water, go into a dark place and let your eyes become dark-adapted, which takes about half an hour. Dark-adapted human eyes are very sensitive to light. Now gaze into the bottle. You will see dim flashes of light. These flashes come from muons moving through the water.)

Clocks and Calculations

But why, you ask, does this happen? Why does moving faster through space make you move slower through time?

Here's a thought experiment that will help you understand — though we warn you that understanding this will twist your brain a bit. We thank Exploratorium physicist Ron Hipschman (whose brain is quite twisted) for his explanation of this mental experiment.

Suppose you have a spaceship that has a very simple clock. This clock is made of two mirrors, one above the other, exactly parallel to each other. Between these mirrors a pulse of light bounces up and down, making the clock tick every time it hits a mirror. (See the picture below.)



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When the spaceship is on Earth, waiting to take off, both a person on the ship and an observer outside the ship agree that it takes a certain time (let's call it t_0) for the clock to tick.

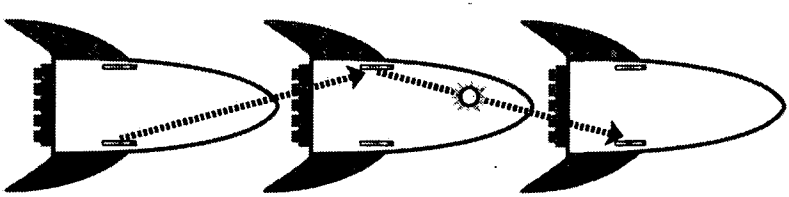
What happens when the ship flies past an Earthbound observer? From the point of view of the person on the ship, nothing has changed: The pulse of light bounces up and down, just as it did before, with the time t_0 between ticks. But the Earth-based observer sees something like the picture below.

From the Earth-based observer's point of view, the light pulse travels on a diagonal path between the mirrors as the ship moves forward. This diagonal path is longer than the straight up-and-down path observed by the person on the ship.

Now we'll remind you of Einstein's two assumptions. The first assumption said that all laws of physics are the same in all uniformly moving frames of reference. The spaceship is moving at a steady speed, so the moving clock has to behave in the same way that the clock did when it was stationary.

The second assumption said that the speed of light is the same for all observers. That gets us into tricky territory. The person on the spaceship and the person on Earth both observe light traveling at about 300,000 kilometers per second. But the Earthbound person observes the light traveling a longer distance for each tick of the clock. Since the speed of light is always the same, it must take a longer time to travel this greater distance. Therefore the moving clock ticks slower for an Earthbound observer than it does for an observer on the ship. Voilà! We have time dilation!

Does that make your head hurt? We sympathize, but we won't stop there. We'll tell you that you can use this thought experiment and a bit of high school geometry and algebra to calculate exactly how



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much time slows aboard the moving ship. You'll end up with the same equation that Einstein did back in 1905!

To calculate the relationship between t_0 and t, you'll use the Pythagorean theorem (which states that for a right triangle with sides *a* and *b* and hypotenuse *d*, $a^2 + b^2 = d^2$). If you look at the illustration of the moving spaceship, you'll see that you could draw a right triangle. Side *a* is the distance between the two mirrors, the distance that the pulse of light travels in one tick of the clock when the ship is standing still. Side *b* is the distance the ship travels in one clock tick. And hypotenuse *d* is the distance the light travels on its diagonal path.

If you know the velocity of the ship and the speed of light, you can figure out the length of each line in the triangle by converting time and speed to distance. You can then create an equation that compares the time it takes the clock to tick in the stationary ship and in the moving ship. (We won't take you through the equations here, but you can find the full discussion on the Exploratorium web site at *http://www.exploratorium.edu/relativity/time_math.html*.)

When all is said and done, you end up with an equation that lets you convert *t* (the passage of time measured by the Earth observer) to t_0, the passage of time measured by the observer on the spaceship. Here's that equation:

$$t = (t_0)\frac{1}{\sqrt{1 - \frac{v^2}{c^2}}}$$

You can separate the right-hand side of this equation into two parts — time and a quantity that physicists call "gamma" (γ).

$$\gamma = \frac{1}{\sqrt{1 - \frac{v^2}{c^2}}}$$

But That's Not All

We'd love to talk about how travel at near light speeds affects length and mass, but we're running out of space and time, which (as we pointed out) are really part of the same thing. We'll just say that gamma shows up in other calculations related to special relativity. Paul says, "Once you know the value of gamma, the math for time dilation and other aspects of special relativity becomes very simple." Pat says, "Yeah. Right."

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But both of us suggest that you visit the Exploratorium's web site, where you get the rare opportunity to experiment with relativity. For those who want to do the math, it's there. For those who just want to blast off to the stars and see what happens, that's an option, too.

The Exploratorium is San Francisco's museum of science, art, and human perception—where science and science fiction meet. Pat Murphy and Paul Doherty both work there. We'd like to thank the Exploratorium for the use of figures 2 and 3, created by David Barker. We'd like to thank all the members of the Exploratorium's Relativity team (Thomas Humphrey, Ron Hipschman, Dave Barker, Noah Wittman, Judith Brand, Sarah Reiwitch, Jenny Villagran, and Ruth Brown) for their inspiration and their contributions to the ideas in this column. To learn more about Pat Murphy's science fiction writing, visit her web site at *www.brazenhussies.net/murphy*. For more on Paul Doherty's work and his latest adventures, visit *www.exo.net/~pauld*.

COMING ATTRACTIONS

HEADING UP OUR May issue is a new adventure in the collective unconscious, courtesy of Matthew Hughes. "A Herd of Opportunity" takes a young Guth Bandar on an adventure in the noösphere that he—and you—won't soon forget.

Next month we also plan to bring you a new ghost story by M. Rickert. "Journey into the Kingdom" starts innocently enough in a coffee shop and goes from there on an imaginative and heartfelt journey into...well, in this case, the title doesn't say it all.

In the months ahead, we'll bring you a new dark fantasy novella by Laird Barron, Charles Coleman Finlay's latest troll adventure, and stories by Albert E. Cowdrey, Carolyn Ives Gilman, and Ysabeau S. Wilce, to name but a few. Subscribe now to make sure you won't miss any of these gems.

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With "Maze of Trees" (Aug. 2005) and this new story, Claudia O'Keefe makes us wonder if her years of living in West Virginia were all just research. This new tale is a timely and harrowing vision that has some of the same frightening power to it that Ward Moore's "Lot" probably had in 1953: this could well be how it goes down.

Ms. O'Keefe lives in New Mexico these days, where she works with the Institute for Space and Nuclear Power at the University of New Mexico.

The Moment of Joy Before

By Claudia O'Keefe

FELICE COULD NEVER REMEMBER who the man was five minutes after he left. She could neither tell you his name nor describe his face. Was he tall or short? Fat or thin? Muscular or soft? What type of clothes did he wear? What were his politics? Or could he not care less what they did in Washington these days?

They talked. That much she knew. Each time he visited her crappy little log cabin outside Cherry Lick, she came away with the impression that they had talked for hours. He also preferred to visit her outside. He was adamant about it, always refusing her invitation to come indoors, one of the few memories it seemed she could keep. In the late spring, they sat on limestone boulders that ruined the pasture behind the cabin as a potential gardening space, misaligned gray rocks that erupted through the March violets and wild onions like impacted wisdom teeth. When summers came, she hauled out her pair of five-dollar camp chairs and they anchored them side by side in swells of waving grass, all the while trying to ignore the flies and stench of cow dung that wafted over her landlord's property. They stood sheltered under the bare, wet-black branches of her

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sugar maple in the fall, her boot toe trying unsuccessfully to push aside layer upon layer of sodden leaves to find bare ground where she could scratch a note to herself about him, just one word. Even in winter he made her stand out on her ice-slimed back porch while they conversed. He kept her shivering and captive for entire afternoons, so that when she found herself inside at last, with no recollection of coming in to warm her hands over her stove's only working coil, her fingers were white and bloodless from the tips down to the palms.

Each time she witnessed his arrival on the sloping gravel drive, she told herself that *this time* she would remember. She would save his name somewhere in her head, some place safe he couldn't pilfer. She'd paint the shape of his hands on the insides of her eyelids, sketch his eyes on her palm with one of her daughter's felt markers, like a student trying to crib a test.

Twice she found her clues, within minutes of his departure, but they were useless, as if she'd scribbled them while asleep and dreaming in that language that makes no sense upon waking. Her depiction of his eyes was equally baffling and disturbing. She'd drawn a pair of whirlpools, violent, watery tornadoes flying across her life and heart lines.

Felice had only two other vague pieces of information about the man. One, he was kind sometimes. Two, a vein of cruelty ran through him darker and thicker than in the richest Appalachian coal mine.

"Are you in trouble, Mom?" her daughter Risa asked one afternoon when Felice picked her up after school.

"What?" Felice said. Looking at her daughter in the rearview mirror, she was unable to conceal her startled reaction. Risa sat in the back seat next to her friend, Sheila, to whom they were giving a ride home.

Light filtered out of the dull September sky like sun through old sheet plastic. It cast yellow reflections at the port wine stain on Risa's otherwise delicate left cheek, turning the birthmark orange. A little more than three months remained until Risa's thirteenth birthday. Though shades of gray emotion often eluded her daughter, as was to be expected with someone her age, she was highly intuitive about moods both black and deliriously bright coloring the world around her. She picked up on them immediately and never hesitated to question that world openly, even in front of strangers.

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"No, honey." Felice laughed. "I'm fine."

She had no intention of telling Risa she sat behind the wheel in total dread because she'd run over a wooly-bear caterpillar on the drive here. Not just one caterpillar, but hundreds. Thousands of them. All crossing Hwy 382 going in the same direction, from west to east. For some reason it had made her think of her odd visitor and want to scream mindlessly.

Now, pulling out of the school parking lot and turning north again, she realized she'd have to drive over the bizarre phenomenon all over again.

Laboring up the road, the car crested the hill that marked the edge of the town where Risa went to junior high and the beginning of their fifty-minute drive back to Cherry Lick. Felice's foot hesitated on the gas pedal when confronted by the stain along the asphalt below, spreading clear to the first bend in the highway, black and inky red and creamy pus all mixed together.

The stain moved.

Risa frowned. "What is that?"

"Woolies," Felice said. Unable to avoid them, her tires crushed the first wave of worms, fat as a little girl's pinky, but covered in fur as dense and appealing as a teddy bear's.

"Oh, God, yuck!" Sheila said, her face and hands pressed up against the window on her side of the car.

Sheila had refused to wear her seat belt and now Felice worried about the girl, who was her responsibility, somehow opening the door and falling out. She heard Risa unbuckle herself. Her daughter grabbed the front passenger's side seat and pulled her upper body over it to better see through the windshield.

"Sit back," Felice warned them both. "Both of you buckle your seat belts. That's the last time I'm going to ask, Sheila."

Both girls ignored her. Her fingers clutched the wheel so hard her knuckles ached.

"Go around them," Risa pleaded.

"How?"

Woolies, living and dead, covered the road from one side to the other.

A pickup truck skidded around the first curve, sliding on the remains of previously smashed caterpillars, while its tires threw up a spray of the

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newly crushed behind them, splattering their car's passenger window. Sheila jumped back reflexively, giggling in delighted fright.

"Stop, Mom."

Felice, wishing she could, did not apply the brake.

"Stop killing them, Mom!" Risa was frantic, her lips twisted and blotchy from biting down on them as she watched.

"I'm sorry, Risa."

This was their only route home, over miles and miles of the gentle creatures, whom Risa liked to pick up and cuddle in her hand each time she found one.

"I'm sorry."

An hour and a half later, drained and still upset, Felice dropped down on her daughter's bed and hugged the girl tightly. Risa resisted at first, but then finally relaxed in her mother's arms.

"Did you see that they were all black?" Risa asked.

"Yes."

"Do you know what that means?"

Wooly-bear caterpillars normally had black at both ends and a reddish-brown striped midsection. Folklore dictated that the narrower the brown stripe, the harsher the winter. Not one of the woolies whose lives she'd just extinguished had even had a brown stripe.

Her fingers pushed Risa's tousled hair out of her face, gently untangling the knots in it without feeling herself doing so. Her eyes grew unfocused. For a split second it felt as if her body was elsewhere.

Felice rocked in a bitter spring breeze, arms around her knees, drawn up on one of the boulders in the back pasture. She saw a man's hands. Strong, long-fingered, cleanly kept. Hands that blurred just a little as they moved, deft and never to be questioned. Hands of warning.

"Winter's finally coming," Felice said. "It comes from west to east, taking as many as the woolies gone. It's coming for everyone we love."

"Yes," the girl agreed softly, not even questioning the ridiculous thing her mother had just said.

Felice and Risa shared their dingy nineteenth-century cabin with Felice's mother, Karena. Both Felice and Karena had fallen on hard times financially during the late 1990s, so it was agreed that they would join

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together as a semi-extended family. They'd moved to the Virginia-West Virginia border from the Tucson area four years earlier, pushed out by the real estate boom that took everything beyond Section 8 housing out of their reach. Very few places in the U.S. remained unaffected by double-digit gains in housing prices at that time. Cherry Lick was one of them.

Karena hated the place. She hated that the nearest city with a bookstore was almost three hours away. She couldn't stand the winters, which she claimed lasted fourteen months of the year. In cold weather she complained loudly and often about the missing chinking between the cabin's heavy log walls, fallen out years ago and never replaced by their landlord, a sweet old hippie whose pot habit left him in a permanent fugue state. She told Felice that she missed her turquoise skies and tacky billboards with long-legged cowboys in neon cowboy hats selling "authentic Indian souvenirs" made in Pakistan.

Of all the things that drove her mother nuts, however, Felice knew she resented the Fundies here the most. Born and raised a firm believer in religious exploration vs. religious dogma, Karena felt herself drowning in a population who interpreted the Bible literally and supported what she saw as Washington's desire to conquer the Middle East in the name of Christ.

"Is this the twelfth century?" she'd ask. "Are we living through the Crusades?"

Felice couldn't say what made her decide on Cherry Lick. It wasn't their sort of town. Outsiders were always outsiders here, each of the families who surrounded their rented home having been on this land since before the two Virginias were separate states. She had to admit that the fervent pursuit of a Christian life dominated her neighbors' lives, socializing, work, schools, and politics. Sex, though it happened as readily here as any place else, was given a crust of sin too difficult to discard. She could go months without hearing someone make a joke that didn't begin or end with the words, "time to come to Jesus."

Curiously, she couldn't remember what her own religious leanings were, be they one of the many flavors of Christianity, anti-Christian, or outside that debate entirely. She felt fairly confident that she wasn't into Judaism, Hinduism, or the Muslim tradition, simply because she hadn't been raised as such. She knew she had once had very definite opinions

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about the order of the universe, but somewhere along the line a hole had appeared in her mind and into it those opinions plunged, never to be resurrected. Instead of trying to remember what her beliefs were, she fought to remember when and where she'd lost them. She thought it may have occurred slightly before she had packed her family into the car, hooked up a U-Haul trailer, and fled Arizona.

Fled *him*.

Not that it had done any good. He'd found her immediately, been waiting the day they moved in.

Rather than dwell on the downsides of her current home, Felice preferred the positives. Spring was glorious here, mostly because it followed winter. She didn't mind using a flashlight to navigate the living room, which sucked all the light out of the house even on the sunniest of days. Nor did the hundreds of thousands of spiders thriving in the cabin's crumbling timbers frighten her. She could flick them away when they crawled over her in the night. Cherry Lick's social isolation didn't bother Felice. She knew she had sought it out. She definitely didn't belong here, but then she'd never really belonged anywhere, even in her home town of Los Piños. Rather than feeling straitjacketed by this area's religious proclivities, she felt comforted living amongst people who let someone else tell them what was what when it came to spiritual matters. Rules were good. Rules meant emotional safety.

Unfortunately as life continued into October, with its harvest festivals and corn mazes, Day-Glo green plastic pumpkins giving way at the megacenter to an avalanche of resin Christmas trinkets before Halloween, while Risa underwent daily tweenie emergencies, discovering Sheila doing the dirty behind the FFA pig barn with the twelve-year-old hunk over whom she herself mooned, and Karena hid in her bedroom with a 2.5 liter bottle of Carlo Rossi Mountain Red, watching late night reruns of *Hardball*, *Meet the Press*, and *The Capital Gang*, Felice paced. She walked. She dreaded. She knew. She slogged through lakes of cow pies out back day after day, knowing her family had only a little while to go now. Just days until life changed and couldn't change back.

In the early morning hours of November 11th, Felice lay in a hypnagogic state, at the far threshold of sleep, the night's dreaming done. Or so she thought. Though she'd recently taken to sleeping with the three-way

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light bulb in her bedside lamp turned to its highest wattage, she could feel the dark outside, its mastery over her part of the world still unchallenged. Cobwebby frost lay over the pasture outside, paralyzing every growing thing, from the bent and rotted stems of summer's thistles to the copperheads that shut their eyes and felt themselves harden into knots, stored beneath the icy ground like so much frozen chicken.

She dreamt the type of dream that feels like real life, and in it her three-way bulb glowed darkroom red. Her sheets, damp with sweat, pooled around her, a slurry of blood pouring over bare legs. Above her dresser, the tiny, frameless mirror she'd found at a yard sale blinked crimson, reflecting an ambulance's revolving lights as they shone in through the window.

"What is it? What's happened?" she sat up and demanded.

Her mother stood at the foot of her bed. She was transparent. She looked happy and young, dressed in a suede mini-skirt and fringed leather vest from the early seventies, her hair an amber beehive of hairspray and Peter Max curlicues.

Oh, my God, Felice thought. *She's dead*. Her ghost was here to say good-bye.

"Mom?"

"I loved Arizona," Karena said. "I loved where I grew up. T-bird convertibles and sunburn. The red rocks of Sedona. Why did we have to leave?"

Felice didn't know what to say to this.

"Something awful has happened," Karena announced, then disappeared.

Felice opened her eyes, now truly awake. Her pulse coursed through the blood vessels in her ears, sounding like floodwaters trashing through a cave. Her lungs expanded painfully as she gasped in surprise.

Her mother wasn't dead. She sat watching Felice from the little chair by the window, looking every one of her sixty-six years. Her shoulders drooped, her cheeks were flush with an unhealthy excitement, her eyes completely resigned.

"God, you scared me," Felice said. She told herself to calm down, breathe more slowly. She figured it must be close to three or four in the morning.

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"What's wrong, Mom? Can't you sleep?"

"I think...." Karena was uncertain. "You should come see CNN."

THE PLAGUE HAD BEGUN.

World Health Organization experts figured the virus entered the U.S. in Seattle, on a jet from Indonesia carrying 435 of the first 500 to die. Only a small percentage of the passengers lived in the Puget Sound area or terminated their travel there. Of the 362 travelers who switched planes at SeaTac, the majority continued on to Chicago, Denver, and Tampa, but a single couple, whose final destination was Dayton, Ohio, proved potent enough as carriers of the disease to fell the passenger lists of three additional flights, each full to capacity. Seventy-two percent of those infected died within a week.

Dubbed the Tsunami Flu because it appeared to originate on a small, remote island flattened by the 2004 disaster, the pandemic confounded epidemiologists who decided early on that they were dealing with a brand new cousin to A(H5N1), better known as the avian flu. Once it was proved beyond doubt that the world was not dealing with bird flu, theories multiplied, among them that the waves devastating the island nation had set in motion a series of events that took years to unfold. Some said the Tsunami Flu had been around for nearly a century, but isolated until the waters made the tiny speck of rock in the Indian Ocean where it lay dormant unlivable, thus forcing survivors to migrate to larger population centers and carry the virus with them. Others contended that a certain animal species, perhaps wild pigs, weakened by the disaster and the destruction of their natural habitat, were transported on floating wreckage to unsuitable ecosystems where a previously low-grade strain of flu was encouraged to mutate into something fatal, then spread to humans.

Felice didn't care. She cared only that the virus came on fast and hard, the mortality rate highest among those younger than eight and over sixty years of age. It incubated and was infectious for far longer than the average flu, but severe symptoms didn't appear until the last stages of the disease, when fatal pneumonia flared up and killed patients within hours. Officials had kept news of the virus under wraps for nine days, badly underestimating how quickly and completely it was able to mushroom.

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When CNN first broke the story, the media had no idea what was going on, only that hundreds of people had succumbed overnight to a mystery ailment that appeared without warning in several major metropolitan areas. People collapsed in dressing rooms at the mall, while hailing taxis, repairing downed power lines, or cruising up to the take-out window for a triple-decker combo.

Karena hugged her parka around her shoulders as she and Felice sat on the edge of Karena's bed, three feet from the TV. Outside, the temperature dropped into the teens. They didn't have enough blankets in the house. Felice noticed her mother shivering under the parka, but didn't feel the cold herself. Hypnotized by LIVE shots of ambulances backed up at emergency rooms, she watched frustrated EMTs waiting to unload their cargo, like limos mobbing the Kodak Theatre on Oscar night.

Footage of a frenzied mother attempting to carry her comatose teenage daughter into a trauma ward unaided played over and over in a continuous loop. Felice and her mother glanced up nervously at the ceiling. Risa slept in the room above.

"We're safe here," Felice said, more to convince herself than her mother.

"You think?" Karena asked sarcastically. "I don't believe that for a second."

"Mom, there's a reason this place is the butt of every late night comedian's jokes. Cherry Lick didn't even have electricity until the sixties. We're lucky our telephone isn't on a party line. Risa told me her friends' kindergarten memories are of picking up the phone and listening in on their neighbors' conversations. We're forgotten back here, isolated."

"We have an interstate and a Wal-Mart. That's all this thing needs."

"The store!" Felice jumped to her feet, reached for her boots. "I should take what we have left in the bank and buy some extra food."

"And get yourself killed by terrified mobs?" Karena reached out and gripped Felice's wrist, fingernails biting into it.

"There aren't going to be any terrified mobs," Felice said. "Not yet. If anyone's awake right now they're either watching wrestling reruns or the Weather Channel. No one is calling this a plague yet. I doubt the locals are bright enough to look at people dying five states away and think they could be next."

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Her mother let go of Felice's arm and sighed deeply. "You know what's right. Go ahead if you think you have to."

"Would you rather starve two weeks from now?"

Karena's features hardened with suppressed anger and familiar fear, the fear that something would happen to Felice, leaving her alone. "You don't talk with the old farts at the post office like I do. If they aren't trying to drag you to a tent revival, they're retelling their family stories about 1918."

"World War I?"

"The Spanish Flu." Karena saw her daughter's blank look and snorted in frustration. "Killed fifty million worldwide, more than the bubonic plague? How many people in the city know about the pandemic of 1918? Hardly any. So little happens of consequence around here that what memories people do have become concentrated. Thousands died in these mountains. They remember it like it was yesterday."

"Which is why I should go now. While I still can."

"Fine. Go."

"Mom? Grandma?" Arms hugged to her chest from the chill, Risa stood in the doorway. Her slippers scuffed the old pine floor with each step as she headed toward the bed. "What are you fighting about?"

"I'm sorry we woke you, sweetie," Felice said.

"We're not arguing, sweet pea," Karena assured her.

"We have some breaking information," said a voice from the television set. All three turned to listen. The tawny-haired man was CNN's top anchor. Disheveled after twelve hours on camera without a break, he looked little better than the unfortunates being hauled out of Denver's ambulances. "This just in. The CDC has confirmed the itinerary of Val and Judy Piets, the couple whose domestic flight from Seattle to their home in Dayton, Ohio, included connecting flights in Chicago and two other cities. CNN is being told that their two other stops were at Louisville, Kentucky, and Charleston, West Virginia. No word yet on whether the couple disembarked for any length of time at either of those airports. As soon as we have that information...."

Felice sat down on the bed again, pulled Risa into her lap and crushed her protectively to her.

"We may already have it," Karena said.

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Felice's stomach soured. "I don't think so. Not yet. I've got to go get us what we're going to need."

She sent Risa back up to bed. She rose. She dressed.

She never left the driveway.

He stood waiting for her by the car.

An hour after sunrise the phone rang. Fighting a mental fog that left her uncertain what she'd been doing moments before, Felice drifted into the kitchen to catch the call before the answering machine picked up. Risa sat calmly with one of their whitewashed flea market chairs faced away from the center of the room, staring through the multi-paned glass door to the back porch and watching something disappear into the woods. Her morning bowl of mini-wheats rested and wobbled on her legs, milk dripping unnoticed onto her pajamas.

Felice grabbed the receiver, while at the same time trying to see what mesmerized her daughter. Herds of deer were an everyday occurrence, flocks of wild turkeys less common. Rarely, they glimpsed the flame-red tail of a fox shooting by, or the monstrous, glorious form of a pileated woodpecker.

A black smudge, taller than it was wide, blighted the pasture, shrinking in size by the second as it traveled farther away. It bobbed up and down slightly like a person traveling over uneven ground, but Felice couldn't make out a head, arms, or legs. It was a shadow, walking like a human. Her breath sped up frantically as she prayed for the forest to hurry and swallow up the dark, smutty thing.

"Hello?" Felice said into the phone.

"Is this Risa's mom?" asked an unfamiliar voice.

Risa turned to look at Felice. Tears ran unhindered down her daughter's cheeks, the sides of her nose, around her mouth. Wetted by them, her birthmark darkened, the color grew more vivid, as if varnished.

"Mom?"

Not vacillating for a second, Felice dropped the phone. "Just a minute," she said absently to the caller, but the receiver had already banged to the floor.

"Risa, what is it? Did you see it? What was that? Did it scare you?"

Risa, clinging to her mother, refused to speak.

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Frowning, Felice gently pried herself free and picked up the phone again.

"Sorry," she apologized. "Who is this?"

"This Risa's mom?"

"Yes."

"I'm Darla Heiney. Sheila Heiney's mom."

"Yes, of course."

"I'm guessin' you know by now about the plague." The woman was terse, matter of fact.

"They haven't labeled it — "

Darla Heiney rolled right over that. "We aren't waiting for them to close the schools. We're sending our children to safety."

"We? Sending them where?"

"The parents here, Cherry Lick. Jerry the bus driver's calling in sick and taking a load up to the old schoolhouse on Muddy Stump Mountain while they're still healthy. Peg'll look after them."

"Peg who?"

"Old school nurse, she and her boys has a camp next to the schoolhouse."

"How do we know *they* aren't infected?"

Darla's dull laugh sounded like lard choking a garbage disposal. "You don't know much about us, do you? Peg ain't been off that mountain in years. Clyde and Hubert only come down to ride the Rattler at the state fair, and that was back in August. They don't got it."

Felice's heart convulsed at the thought of sending Risa away with these hicks. Could strangers be trusted to keep her warm enough? Would they feed her anything remotely edible? What happened if Risa became ill? Felice wished she didn't have to go out into the world to make a living. She could simply keep her daughter home until the danger passed.

Darla interrupted the silence between them as if guessing her thoughts.

"Hon," she said, "I don't really care what you decide. It's Sheila made me call. She's worried about her friend."

Risa's tears had evaporated, whatever she'd seen through the back door thrust aside once she intuited adults were talking about her.

"Mom — " she began.

Felice didn't hear the rest. Memories only hours old and already fading wormed their way back to the surface.

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Her car keys dangling from slack fingers, the emergency run into town now a non-issue. Not a whisper of light fell from the night sky, the new moon not yet exited her womb, clouds obscuring every star. Yet she saw him clearly, the back of his head as he walked away from her. Hair black as clotted blood, each glassy strand sharp enough to cut naked flesh.

"Felice." His voice crawled inside her ear on ticklish insect feet.

She shuddered.

"I want her," he said.

"Jerry will stop at the end of your drive an hour later than usual," Darla said, bringing her back to the present. "He'll wait two minutes."

"Yes," Felice said. "We'll be there."

WISPY, GOOSE-DOWN SNOW swirled about mother and daughter as they stood just the other side of the icy cattle guard separating their drive from the road. They were located on a blind corner, the opening to their drive hidden by fir trees and wild hedgerows of leafless greenbrier.

Anxious that the bus driver might not see them and opt not to stop, Felice felt a soothing touch and looked down to find Risa's hand on her arm.

"Jerry can see me from here."

"Okay," Felice said.

Pickup after pickup truck passed by, drivers nodding to them sadly. How many similar scenes had they witnessed along this road?

"God bless you," an elderly farmer called to them as he cruised by, window rolled down despite the frigid temperature.

Felice stroked her daughter's hair. "You know I love you — "

" — a whole big bunch," Risa finished the habitual phrase for her. "I love you, too, Mom."

"I'll come get you soon. I promise. We'll get your favorite quadruple fudge brownie at the mall in Roanoke. We'll get two of them, smash them together and make it octodruple fudge!"

Risa smiled, but didn't laugh. Even as a baby, Risa had been gifted with a beautiful laugh, never a giggle, but melodious, uninhibited laughter that made the air shiver and clear. Felice remembered the last time she'd

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heard it. When they still lived in Los Piños. Unlike a toddler's fierce attachment to her favorite blankey or a five-year-old's innocent belief in Santa Claus, something in Felice told her those joyous sounds should not have been allowed to lapse. Her daughter's beautiful laughter had been a language in itself. Her bilingual nature should not have been suppressed, even when the adults around her forced her to use only the tongue with which they felt comfortable.

Felice would give her life to hear her daughter laugh like that right now.

Jerry roared up the hill and around the sharp bend, his bus already overloaded with children. They sat dangerously high in seats piled with luggage. Backpacks and crates of food and an avalanche of sleeping bags filled the aisle. Spotting Risa and Felice, he hit the brakes, sending children tumbling off their perches to the floor.

"Sorry 'bout that," Jerry said, when he opened the door. His hand trembled on the wheel. He wore a sterile paper face mask.

Perceiving Felice's alarm, he pulled down the mask in order to speak more clearly. "Don't worry. I ain't got it. It's made some of the parents feel more easy sending their kids off with me is all."

Felice nodded. She kissed Risa's forehead and held her close. Jerry would have to pry her away if he expected Risa to get on the bus.

"Ma'am," he said.

Felice gazed up at him.

"Lots of kids to pick up. Lots more worried-sick parents. We've got a long way to go."

Felice nodded again and released her child, righted the heavy, adult-sized camping pack on Risa's shoulders, and gave her a gentle nudge toward the bus.

"Mom, guess what!" Risa pivoted suddenly on the step, her eyes strangely bright and out of character for this somber good-bye. "*He* spoke to me."

"What? Who spoke to you, honey?" Felice asked urgently. "What's his name?"

Risa started to answer, but Jerry pushed the lever to close the bus's hinged doors, putting glass and metal between them, and Felice couldn't read lips. The bus rumbled away in an explosion of grinding gears, diesel

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smoke, and burning oil, leaving Felice standing precariously on the cattle guard, the life drained out of her the farther Risa rode from their drive. She felt fragile, old, less of a person. She wanted to scream, knew she could because no one lived close enough to hear her. Instead, she turned and headed back down the drive, quiet, eyes growing hot with held back tears, not knowing what came next.

Sixteen hundred dead that evening. Twenty-three hundred by the next morning. Thirty-four thousand within two days. Two hundred and seventy-eight thousand by the following week. Neither of the Tsunami Piets, as the media began calling the married, ill-fated disease carriers from Ohio, had disembarked in Charleston. As Karena predicted, a Wal-Mart trucker stopping at the Covington store in Virginia brought it to those living on the border. Though nothing happened for more than twelve days, on the thirteenth day, the first cases of the flu cropped up along the Alleghenies, reaching into every hollow within an hour of the Interstate. Nor was the trucker the only source of transmission, just the first of hundreds infected to bring death to the Mid-Atlantic.

Rather than being safer, the Appalachian hills turned out to be one of the places with the highest per capita ratio of fatalities. Though those in high population centers had a greater chance of contracting the disease, after more than a million deaths in the U.S. it was thought the better, more readily available medical care in the cities gave victims an edge. Emergency production of medicines and an eventual vaccine would lead to a tapering off of deaths in the cities, the talking heads on MSNBC forecast. In the nation's poorest, most rural areas, however, that same help would be slow arriving and more difficult to distribute. Events were cancelled and most public buildings closed. Felice's boss called her and told her not to come in; the office would be shut down until further notice.

Days, then weeks went by without a single opportunity for Felice to speak with Risa. No phones, not even party lines, were installed atop Muddy Stump Mountain. Cell phone coverage was nonexistent more than a few miles from the Interstate. Who communicated with the old schoolhouse and how? Felice wanted to know. Her sole link to her child was the surly Darla Heiney, hardly a font of information.

"They's not hacking or coughing or wheezing or anything like that," Darla told her over the phone.

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"But have you heard anything about Risa?" Felice asked. "Has your daughter said anything to you about her? Is Risa scared? Is she homesick? Is she eating?"

"Hon, I just don't know," Darla said. God, how Felice had come to hate Darla's "hon's." "They's not talking to us at all right now with the Tsunami spreading so much."

"Can you send a message? Can you get a message to her?"

"No!" Darla bawled into the phone, drawing out the word in that peculiar mountain way that mimicked a heifer giving birth at the bottom of a sink hole. "I done told you that before."

"But I don't even know where Muddy Stump Mountain is. No one will tell me and there aren't any maps of this area for sale. I've never lived any place where you couldn't buy a damn map!"

"You're not thinking of trying to get up there, are you?" Darla asked, "'cause the way things are right now, Clyde and Hubert will shoot you on sight if you get anywhere close, no questions asked."

"Are you telling me I can't go get my child if I want to?" Felice said.

"That's exactly what I'm tellin' you."

"You can't stop me."

"Maybe not me, but Hubert's twenty-gauge Mossberg sure can," Darla said. "Felice, you're just going to have to put your trust in the Lord till this thing's over. Be strong in knowing that Jesus is looking out for her as we speak."

Apparently the savior wasn't looking out for Darla Heiney. She died the next morning.

Cut off from even this feeble source of news about Risa, Felice moved into full-panic mode. She called the school again, hoping someone might have been left behind to field questions after it closed its doors. Now not even the answering machine in the front office picked up. She found the bus driver listed in the phone book with his address and raced to his house next to a rarely visited Civil War battlefield. His front door stood open, the place deserted. A litter of starving, flea-bloodied puppies abandoned by the family whined and tripped her up as she made her search of the home for clues to Risa's whereabouts. Nothing. Nor had a crumb been left in the house for the dogs. After filling an old enamel roaster with fresh water for

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the animals, the best she could do, she moved on, pounding on door after neighbor's door. No one answered. Cars sat in many of the drives, but she detected no movement in any of the houses. If the residents were home, they remained in hiding. She drove to the junior high. It proved a useless trip. A thick chain and industrial-sized lock put the place off limits. Officials hadn't even left information at the gate.

Her Chevette wound for hours along one-lane country roads, passing yard after yard of brown ice and toys forgotten in mid-play, but she saw no children. Her concern wasn't that she'd miss spotting the mountain schoolhouse amongst the leafless trees and hills so convoluted and covered in mud they were like dirty blankets piled in a laundry basket. What drove her to near madness was the unhelpful, unconcerned behavior of the people she did find to question. Judging by their accents they'd lived here for years, if not their entire lives, yet none confessed to having heard of the old school. They listened to her frantic, gradually more strident story, and shrugged.

Her gas gauge rode below "E" for more than twenty miles before she found a service station. Though it was only a little after three in the afternoon, dusk overpowered the winter-short day and blackened every hollow. Pulling up to the pump, she sighed in relief to see a light on inside. Digging into her purse for her wallet, she looked up, reached for the door handle, and found a shotgun barrel aimed at the spot between her eyes.

"Don't, ma'am," said the station owner through the rolled-up car window.

"I just want some gas and a cup of coffee," she said.

"No coffee. No food," he said. "We got gas, but we's got new rules for the duration."

"All right."

"I'm going back into the store. I'm going to trust in the Lord that you is an honest person and will pay me for what gas you take. Leave the money inside that there tire over there."

He pointed at an old tire lying in the dirt next to the pump, filled with soil and the desiccated remains of last year's hollyhocks. His gaze never left her as he backed into the store as if she were the one with gun about to pull the trigger.

"Wait!" she called after him. "Do you know where — "

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He shut his door quietly, yet firmly.

Felice followed instructions, filled her tank, paid, and drove home.

She didn't sleep that night, couldn't stop twisting and turning various scenarios over and over again in her mind, each involving Risa sick or in trouble and calling out for Mommy, who wouldn't answer, wouldn't come to her aid.

"How could you just let her go like that!" Karena said to Felice's back, as her daughter paced anxiously in the cave-like living room at dawn.

Felice turned to see Karena enter from the kitchen. With the morning sun at her back, her hair half-wild from sleep, and resentment she'd suppressed for days carving a look of fury into her features, her mother resembled a ship's figurehead cutting through the gloom. Felice felt that anger plowing toward her and cringed with guilt.

"How could you let them take her without knowing where they were going?" she asked.

"They did tell me where they were going. Muddy...."

Fear made it hard to focus. *What am I going to do? How do I get her back? I don't have anyone to help me. I'm alone.*

"Muddy Hump — "

"Muddy Stump Mountain," her mother said. "For God's sake, you don't even remember the name of the place, let alone know how to get there. What kind of a mother are you?"

"A terrified one. Okay? I admit it," Felice shouted. "I'm absolutely terrified we're never going to see Risa again. It was Jerry, the bus driver. It was the school bus that came to pick them up. Shouldn't you be able to trust a God-damned school bus? How was I supposed to know these frickin' people were totally disorganized? It was all happening so fast, the deaths, the thousands of deaths, the train wreck spread of this thing, the inevitability that it would come looking for us here. I figured everyone else was just as terrified as me. Jerry would rush our children off to safety and then be in touch with us immediately to let us know they were safe and what was happening to them. I don't understand the people in this place. I've tried to figure them out, what goes through their heads, but I don't get it. It's like they care about the sanctity of life, about others, about their children, but they don't care. They're like Darla Heiney, shrugging it off their backs and then dropping dead."

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Felice felt as if she were physically coming apart. A thousand horrible emotions flooded through her, tumbling her about inside herself, dragging her under like an invisible riptide.

"I was afraid for her when I sent her off," she said. "That's why I did it. I was afraid *he'd* get her."

"He? Who are you talking about?"

"The man, the person who's always visiting us."

"What man? Felice...." Her mother reached out to her. "Do you have a fever?"

Felice pushed her mother's hand aside before she could lay it against her forehead.

"Don't touch me."

"Why, are you sick?"

"Yes."

Did she imagine it, or did her mother hesitate, retreat a step in self-preservation? A moment later, Felice glimpsed her mother's instant shame over a purely human reaction. Saw and forgave.

"Sick with worry," Felice said.

"I'm sorry," Karena said, softening her attitude. "I know you were just trying to protect Risa. I'm worried, too."

"Mom, I don't know what to do."

"We go look for her, is what."

"What do you think I did all of yesterday?"

"But you didn't have my connections."

Felice frowned. Had her mother been out where she could catch the flu? "What connections?"

"There's this old geezer at the post office. He hovers inside the door almost all day long. Now that they've discontinued counter service and the postmaster is no longer there, he doesn't have anyone to talk to. His mind is half-gone, but there's enough left that he recognizes me every day and keeps hitting on me. I'll ask him where they've taken Risa."

"But if he's as far gone as you say — "

"He's still got fingers," Karena said. "He can point."

Hope, a small sliver of it, pushed through Felice's monologue of inner dread.

"I don't want you getting too close to him. Even yesterday, I did my

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best to stand a few feet away from people." She thought of the gas station owner. "Not that they would let me come near."

"Don't worry about me. Our biggest problem is what to do once we find the schoolhouse."

"What do you mean?" Felice asked.

"They're armed, aren't they?"

Felice thought for a minute, pacing again. "I wish I had a bullhorn."

"Signs," her mother said.

"Big signs!" Felice agreed. "We won't drive up directly to the schoolhouse. We'll get just close enough for them to read our signs."

"Doesn't Risa have some white poster board in her room?"

Felice hugged her mother. "I'll get busy making them. You drive down to the post office and talk to this guy."

Karena grabbed the car keys.

"Remember, don't get too close," Felice said.

She went to work, thankful her mother forgot to question her about the visitor. She regretted having blurted out what she did. It was as if by telling another person about him, it made him more than figment, gave him a life she dared not let him have.

Half an hour later, she capped the ultra-fat permanent marker, finished with the signs asking for her daughter's release, and suddenly realized her mother hadn't returned. Their post office was less than a mile away. It shouldn't have taken Karena this long to ask someone a simple question. Felice went to the front window and glanced uneasily up the drive. She gasped.

The top of their driveway was gone. Her mind tried to understand what she saw in its place, but refused. It recoiled at the total absence of reality it perceived, the hole in the world it saw just two hundred yards away. Whatever was there was literally beyond her comprehension. Unable to identify it, her brain filled in the gap with something more reasonable, the way human vision colors in the natural blind spot every person possesses by copying and pasting what surrounds it.

A black stain. A floating miasma that erased ground and gravel and cattle guard.

Everything in Felice tensed, came to a stop, her heart, her breath, her thoughts. The sight paralyzed her completely.

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Intelligent, the thing reacted the moment Felice came to the window, as if it could see her, roiling swiftly down the drive toward the house.

"Stop."

Felice knew she had spoken, though she didn't feel her lips move, couldn't hear her heart beating or see her chest rise and fall.

The phenomenon slowed its progress and halted in place, consuming the empty parking spot in front of the house and the volunteer sumac shading it.

Her thoughts unlocked themselves long enough for hysteria to set in. What was that thing? What did it want? Had it hurt her mother? She knew in her soul that Karena needed her right now. Something horrid had or was about to happen. She had no car. Her mother had taken it, which meant she'd have to rush the mile to the post office on foot.

Past that.

"Go away," she said.

It didn't move.

"Please just go away."

It came closer, past the four-story fir tree where owls hooted at night, past sleeping forsythia bushes, over the ring of stones marking the bed where peonies and poison ivy flourished in late spring, around the front porch, halting only when it was in arm's reach of the window where Felice stood.

The wrongness of it swallowed everything. Incredulity struck Felice blind seconds before the stain formed fingers to touch the window glass inches from her face.

When her world finally came back to her, she discovered herself racing down the final quarter-mile to the main road. How had she gotten here? Had It put her here? Had she managed to get around it, through it?

Her throat burned, her body unaccustomed to exertion in the raw air, as she sprinted through a church parking lot and arrived at the post office. Parked in front, the Chevette's engine was still running, but no Karena. Instead, an elderly man dressed in a puffy silver jacket that belonged on someone sixty years his junior attempted to flag down a rusted-out minivan speeding by on the highway. It wouldn't stop and the man, drained by the effort, crumpled to the asphalt parking lot like a discarded ball of aluminum foil. As he fell, his arms wrapped around something at his feet.

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"Mom!" Felice cried.

"This your Ma?" asked the man, who had only three teeth and smelled of moldy carpeting.

She nodded. He released his protective hold on Karena and crawled aside.

"She fell down," he said.

"Felice?" Karena wheezed and clutched her chest. Her body shuddered. Her skin was tinged a cross between vein blue and shocky white. She labored to sit up and failed. "I can't breathe."

NINE-ONE-ONE put her on hold with an estimated wait time of thirty-one minutes. Cherry Lick's local volunteer fire and rescue didn't answer their direct line. Karena tried but was already too weak to stand, let alone walk as her daughter assisted her to the car's passenger seat. Sweet, very sweet, though he knew the risks, the old man did his best to help, but mostly got in the way.

"You should stand back," Felice told him. "I don't want you to get it."

"My son is dead," he began, shaking his head. "I'm tired of winter."

Felice nodded her understanding and laid her hand lightly on his shoulder. It sagged beneath her palm. Though uncomfortable saying it because his sense of the divine was not her own, she wanted to give this man something to ease his pain. She smiled at him.

"God is standing right beside you," she said. "I see him. His hand is on your other shoulder. He will be there when he brings your son to welcome you home."

The old man's lips trembled. "Thank you," he said.

She climbed in behind the wheel, backed up and tore out of the parking lot as fast as the ancient hatchback would take mother and daughter toward the nearest hospital.

A National Guard roadblock barred her way half a mile from White Sulphur Springs.

"I'm sorry, ma'am," the female soldier with bleach-fried hair and an M-16 rifle told her, after instructing her to roll down her window no more than a crack. Most of her face hid behind a mask that Felice guessed must

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have dated to the first Gulf War. "I can't let you pass. White Sulphur Springs, Lewisburg, and Ronceverte are under quarantine."

"Quarantine!" Felice cried. "The flu is everywhere."

"I know, ma'am."

"But I have to get my mother to the hospital."

"The hospital's full."

"The clinics?"

"Those resources have been deployed elsewhere."

Felice made a choking sound. "Deployed? Where? How do you deploy a building? This is an emergency! My mother needs immediate care."

"I understand, ma'am, but I can't let you pass."

Felice gazed beyond the military Hummers and barricades, attempting to see what went on farther down the road at the edge of White Sulphur.

"Don't even think about it," the soldier said.

"Think about what?" Felice asked innocently, but knew her thoughts were transparent.

"We have all the roads, all of them. You can't get into town."

"My mother is...." She didn't want to say dying, not when Karena could hear her and give up before they could find help. "My mother is extremely ill," Felice begged.

For the first time since their encounter, the soldier bent down and looked into the car at Karena slumped in the passenger's seat, laboring to breathe. "I can see that, ma'am," she said finally. "Here." Latex clad fingers pushed a slip of paper through the crack between window glass and door frame. It fluttered into Felice's lap. The phone number for a rural aide worker.

"They usually have Tamiflu and some of the other drugs. That's all I can do," the woman said. "Now, please, if you'll turn around over there."

Felice turned and drove all of fifty feet to a pay phone. She dialed. The line picked up.

"Give me your address," said a sour-sounding man on the other end of the line.

Felice hesitated, not knowing if she'd heard right.

"You're calling from the pay phone next to the Hardee's, aren't you?"

"Yes."

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"What's your address?"

"Can I come to you?"

"No."

"My mother, it was so sudden. She wasn't showing any signs, but I'm scared. I think it's really bad."

"She's not alone," the man said.

His cold, impersonal tone caught Felice by surprise. "No, you're not hearing me," she said.

"No, you're not hearing *me*. Give me your address and go home. My wife will be there when she can."

A cold drizzle slicked the highway as Felice rushed toward Cherry Lick. It turned to hard rain once the barricade was out of sight and the wind picked up. As she passed Risa's school with its construction paper Thanksgiving turkeys still in the windows and the forlorn look of someplace that would never reopen, hail peppered the windshield. Icy rain came next, slashing at the trees, streaking by the side window like globs of frozen spit. Her tires shimmied on the curves. The road changed course and they charged into gale force winds where the spit became wet snow. The roads were eerie, untraveled by anyone except for a car heading the opposite way with an urgency Felice recognized.

Karena complained every moment of the way home, growing less lucid by the mile. Felice worried the freezing temperatures in the car exacerbated her rapidly deteriorating condition. Their heater was broken, but she cranked it on high anyway in hopes it would miraculously revive. Her mother coughed uncontrollably. Now that professional medical care proved to be out of reach, Felice cursed herself for making the decision to drive rather than go straight home and continue to call for help from there. Alarm settled in her chest and permanently altered the tempo of her heart. She couldn't get home quick enough, couldn't turn the wheel and slide and fishtail through this white crap mounting up on the roads fast enough.

Get Mom to warmth, she thought over and over again, concerned the aide worker would arrive at their cabin, find no one there, and pass them by. *What's in the medicine cabinet? There's got to be something in there I can give her.*

As she turned onto their road, it occurred to her that she hadn't seen their home since the stain had come. What would she find when she

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rounded that final bend? Would the top of the drive still be a black hole? Would there be a drop-off into nothingness where she normally parked the car? Would *It* be waiting for them? What had she been thinking to give the aide worker's husband this address? She could have lied and taken Karena to any number of empty houses she'd visited yesterday, the bus driver's place, for instance.

Five-inch drifts as coarse and sloppy as ice rink shavings covered the drive. No holes, no dark, boiling fog. Just snow and — she lifted her foot off the gas momentarily when she spotted them — tracks. Not knowing what to expect, she veered down their steep drive, obliterating the signs of human visitation leading to their porch.

A slight figure in a quilted pink coat she didn't recognize huddled against the door, taking shelter under the overhang. Hearing the car rattle over the cattle guard, the obviously miserable refugee looked up.

"Risa?" Felice whispered. She forgot to be careful in the snow and slammed on the brakes, barely able to keep the car from sliding sideways into the pasture.

"What?" Karena blinked. "Did you say *Risa*? Is she back?"

"Yes, Mom. Risa's back."

Yesterday she would have endured any torture, any loss to get her daughter back, see her running toward the car, made clumsy by the snow. Would have stomped on the parking brake, thrown open the door and gathered Risa in her arms in delirious reunion, swearing never to let her daughter go again.

Today, she honked the horn, beat on it several times until Risa got the message and stopped twenty feet from the car. Its headlights spotlighted her confused face through the heavy flakes falling between them, her nose and birthmark reddened by the cold, hands made blotchy by it. She was soaking wet from her sneakers up to her knees from hiking through drifts. The thin, unfamiliar coat could not have kept her warm on her journey.

Felice opened her window.

"Stay away!" she shouted. "Grandma's not feeling well."

"But, Mom — "

"No, Risa, stay back!"

"I couldn't find the spare key under the snow."

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"Risa, listen to me. I'm going to turn off the engine and throw my keys to you."

Felice didn't know if she was already contagious, didn't know if objects could pass this disease to others, but didn't want to take the chance.

"I want you to take off one of your socks and put it over your hand."

"What?" Risa, expecting her mother to comfort her, not bark orders at her, began to cry in exhaustion and fear.

"It'll be okay, sweetie. Just do what I tell you."

"But, Mom — "

"No, listen to me!" she said. "Open the house, leave the keys in the lock, and go to the kitchen. I want you to make yourself some hot chocolate in the microwave and take it up the back stairs to your room. Change out of your wet clothes and get under every blanket you have. Do not come downstairs, no matter what you hear. As soon as I have Grandma settled in her room, I'll be up to see you."

Risa, ignoring everything she'd just said, started toward the car again. Felice laid on the horn and, eventually, her daughter grasped the seriousness of the situation.

"I love you, Risa," Felice said. "I don't know how you got here, but I'm so glad." She lobbed the keys into the snow. "Now, go!"

"YOU'RE lucky," said Trina, the home aide worker, a fortyish woman with a New Jersey accent, sterile gloves, and a face mask tied so tightly around her head it creased her cheeks. "You're the last house I'll be able to visit tonight. If I don't start now, I don't think I'll make it home."

"Yes," Felice said, "come in, please."

Felice gave the woman points for achieving the near impossible, finding their half-hidden drive in white-out conditions and having the guts to navigate down the driveway.

"Oh." Trina grunted thoughtlessly when she saw Karena. The look she gave Felice offered no hope whatsoever. "She has it."

After all she'd been through already, and the undignified struggle dragging her mom through the snow, scraping and bruising them both because she wasn't strong enough to carry her, tearing the medicine chest

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apart and throwing every last useless thing on the floor in her frantic search for something that could make Karena feel better, sitting by her bed and holding her hand and reassuring her again and again and again that medical help was on its way, would be here any second — to have this stranger come in and dismiss her chances so casually made Felice want to rip the woman's throat out.

"Please." Felice gestured for them to step into the next room. She spoke in a low voice. "You're going to tell me there's no chance for her and I don't want her to hear that."

"I can give you some OTC flu medications, Sudafed, Benadryl — "

"What?" Felice was stunned. "I thought you were going to bring us real help. The woman at the barricade said you carry Tamiflu."

"I'm not a doctor," Trina said. "I'm not even a nurse. The rules don't allow aide workers here to dispense prescription medications."

"Rules! What do the rules matter now?"

"I'm sorry."

Trina dug into the bulging carry-all hanging from her shoulder and retrieved a package of non-prescription flu tablets.

Felice begged for the second time that day. "Please," she said, forgetting to whisper, her voice steadily rising. "My mother is the only family my daughter and I have. We're all each other has. Please, you must have something else in that bag. My mother should be in a hospital right now."

Trina set the package of flu tablets on a table and stared at Felice for several seconds, undecided. Finally, she reached into the bag again and brought out a small, black book.

"A Bible?" Felice said.

"Our savior is the hope you're seeking right now," Trina said.

From the other room, Karena burst into the conversation. "Does *everyone* here have to be a turd for Jesus?"

Felice's eyes widened and she felt herself blush.

"What?" Trina asked, as she ventured into Karena's room again.

Karena, hysterical at the onset of chronic pneumonia, fought the confines of her blankets. Every word she spoke came out like the moan of wind sucking rain through a bed sheet. "I said, does everyone here have to be a turd for Jesus?"

"Turd?" Felice forced her voice to be light. She didn't want her mom

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to drive this woman away before she could convince her to help. "You haven't been hanging out with Risa's friends, have you?"

Her mother wouldn't be jollied out of her anger. "Felice, what on Earth made you decide to bring us here? The moment we moved into this house, I knew it would be the last one I'd ever live in. I knew I'd die in Cherry Lick. I love you, Felice, but I'll always resent you for this. I just don't get it. Why here? This isn't your home. Christ, these people live, eat, breath Him. They're so obsessed with the Bible they fart and belch in scripture."

Clearly offended, but retaining her professionalism, the aide worker backed out of the bedroom. Sitting on the edge of her mother's bed, Felice looked over her shoulder at Trina. The woman appeared ready to bolt for home, but Felice put everything she could into communicating their need using her eyes alone. She had the feeling that behind her mask, the aide worker's lips pursed in a stern frown.

At last Trina nodded and the corners of her eyes softened in a smile, one Felice felt certain was pity.

"God bless your family," she said. A moment later, the front door clicked shut.

Felice rose to turn the lock and saw it, a small, brown paper sack next to the package of OTC flu remedy. She opened it and peered inside at two sample packs of prescription medicine, the type doctors often gave to their patients as free trials.

She dosed Karena immediately, then sat in the chair next to her mother's bed, with the phone to her ear, on hold with 911 for another hour before she gave up. Upstairs, Risa would be lying frightened in her bed. Karena's anger had eased after she received her medicine. Felice knew she should go up and reassure her daughter, yet when she started to leave, she noticed her mother's gaze searching timidly about the room.

"Mom?"

Karena didn't answer, showed no signs that she heard Felice. Her eyes grew weepy and red around the rims. Gone was the confident, outspoken woman.

"Mom? What is it? What can I get for you?"

Felice didn't really need to ask. She could see it in Karena's eyes. Only one look had that type of desperation. Her mom wanted her own mother, long dead.

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"I want to go home," Karena stated.

"I know," Felice said, softly stroking her mother's damp brow.

"Back to Los Piños."

"Home," Felice nodded and said.

"I miss it so much."

"Get well!" Felice said, her own eyes hot, ready to spill over. "Get well and I promise you I'll get us home. I will."

"Mom?" Risa called to her from her bedroom.

"I'll be up there in a minute," Felice told her. "Did you do what I said? Are you warm?"

"Yes, Mom, but there's something I have to — "

Felice couldn't handle things a moment longer. She needed escape.

"In a minute, sweetie."

She rushed out the back door, not even stopping to put on a coat.

Snow blew under the porch eaves. It frosted the old slatted swing, which gyrated wildly in the wind, suspended by twin lengths of chain. Felice paced up and down the narrow portion of decking free of drifts. Flakes landed in her eyes and melted in her tears. She'd never felt guilt this heavy. What possessed her to bring her family here? Her mother was among the seventy-two percent. She would die tonight without seeing home ever again. More than anything, she wished she could make this hideous form of death easier for her.

Though she'd told Risa she'd be only a minute, she paced until her energy ran out and her feet stumbled. Uncaring that the wind and snow plastered her back, she brushed off the porch swing's painted slats and collapsed into it. Her weight calmed its fierce movements and she stared out into the back pasture. Snow made the wind visible. Its currents and whirlpools, tossing and thrashing, a stormy sea not normally seen, hypnotized her. Her emotionally exhausted mind groped for understanding, the reason for all of this, the reason for everything. What was the black stain and why did it come here? Why couldn't she remember her mysterious visitor the moment he left? Who was he?

"*Felice,*" he'd said. "*I want her.*"

Finally, the cold and wet penetrated her overexcited, overheated body. Dusk encroached, turning the storm midnight blue. She realized she

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had to go in. Half-blinded by the snow, she almost missed the tiny spot of red under the barren sugar maple.

Curious, she shielded her eyes and descended the steps, then punched through the drifts toward the shelter of the tree, where the snow was only a couple of inches deep.

At first she thought they were plastic, blown here across the miles from the cemetery in town, where wreaths of fake flowers adorned nearly every grave. Then she crouched down and touched the poppy-like petals. Each blossom had a black spot at the center in the shape of a three-pointed star. She dug snow away from the slender olive-green stems and discovered that they were firmly rooted in the earth. Her mind wouldn't accept what she'd found.

How? she asked herself. "How?" she said aloud.

The small cluster of desert wildflowers didn't belong here. Native to Western Arizona, they did not grow in winter, Felice knew, nor east of New Mexico. In fact, there was only one place she'd ever seen this particular strain.

Blast after blast of wind flattened the blossoms to the ground, but not a petal was lost. In wonder, Felice picked them, protected them in her arms, ran up the steps, through the back door, and into her mother's bedroom.

Two startled heads popped up, when she rushed into the room.

"Risa!" Felice said.

Chair pulled up to the bed, her daughter sat with her upper body lying across her grandmother's bedcovers, gently hugging her. She jerked upright at Felice's entrance.

Alarm Felice imagined would assault her system only during the last moments of her own life, crushed the breath from her lungs. Adrenaline lit her nerve endings painfully on fire.

"Oh, Risa!"

"Mom, you don't have to worry."

"Risa, leave."

"No, Mom."

Felice approached the bed, still clutching her haphazard bouquet of wildflowers.

"Please, for me, honey. It may not be too late."

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Karena's glassy eyes fixed instantly on the flowers in her daughter's hands and lit up in pure joy.

"Mariposa lilies," she said. A feeble hand reached for the gift her daughter brought her. "Is it spring already?"

Felice cupped her mother's hands around the bunch of lilies and assisted her in lifting them toward her face. Her mother attempted to gather their warm, dusty perfume into her nose. Though Felice knew she couldn't possibly smell anything in her condition, Karena pretended the fragrance was magnificent. She sighed and her fingers petted the blossom's large, soft petals as she smiled up at her daughter.

"Thank you for keeping your promise, Felice. Thank you for taking me home."

"Los Piños," Felice whispered to her and touched her hand.

"Los Piños."

Her mother sighed again, closing her eyes.

"Why, Risa?" Felice asked when the two stood in the living room together, allowing Karena some fitful sleep. "You're exposed now."

"Mom, I've already got it."

"No!" Felice denied it. "You're not sick."

"I've been trying to tell you, but you won't listen."

"How did you even get here?"

"Mom, listen to me!" Risa almost shouted.

Felice steered her daughter into the kitchen so she wouldn't agitate Karena.

"They all have it up on Muddy Stump."

"What? How? They weren't supposed to let anyone near the schoolhouse. They wouldn't let *me* near it. Wouldn't even tell me where it was. I drove around for hours looking for you."

"Sheila snuck out to see her brother," Risa said.

Felice thought about her last conversation with Sheila's mom, Darla Heiney, the news the following morning.

"Sheila's mom is dead," Felice said.

"So is Sheila. So are half the kids at the school. Sheila gave it to all of us. When that old lady and her two sons who were guarding us died, a bunch of us got in their trucks and got out of there."

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"Drove?"

"Don't be so shocked, Mom. The girl who drove me home was about to go for her learner's permit when Sue hit."

"Sue?"

"Duh. Short for Tsunami."

"Risa, this thing doesn't infect everyone automatically. You shouldn't have gone into your grandmother's room. You shouldn't be near me without protection. Go get one of those painter's masks from the tool box in the furnace closet and put it on."

Risa shrugged. "But, Mom — "

"Do it!"

Felice waited until Risa headed toward the storage room at the back of the house, then returned to her mother's room. She halted one step inside the door.

He stood at Karena's side.

His lips were beautiful.

His hands, exquisitely carved in flesh and bone and skin flawless as alabaster, spoke of a will no one on Earth could resist. His cruel posture dismissed everything and everyone because whatever anyone wanted truly didn't matter. His hair might have been sharp as prison wire and the icy hue of a meteor shower in mid-winter, but his lips couldn't hide what he thought sometimes.

Sorrow, genuine and final.

"I'm sorry," they whispered.

Why is he in my house? Felice wondered dully. *He's always refused to come indoors.*

"You said you wanted her," she said. "Why did you want my mother?"

This isn't memory. This is now. I'm seeing him now.

"I can see you changing, Felice," he said. "You aren't quite forgetting, but you aren't remembering. Time is short."

She tried to force herself to look into his eyes, but she couldn't move her gaze above those terrifying, seductive lips.

"Whatever you have left to do to prepare, you must hurry."

If she looked into his eyes she would know everything and everything would be lost. She had to forget again.

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During the precious seconds she wasted thinking this, he placed his hand over Karena's heart. One moment her mother was there, living in agony. The next, an empty husk grew still and sank deeper into the mattress. Felice saw nothing, no light, no mist, no ghostly apparition. She sobbed at the lack of what her expectations told her she should experience when her mother left her. She'd had no time. She hadn't had the chance to prepare.

Though he didn't actually touch her as he passed her, his aura, the black stain, brushed her cheek and she glimpsed a thousand happy memories, a thousand ugly ones, her entire life compressed into a single sensation, one sound, a mixture of rushing water and sun shining on dreaming eyelids, and the half-life of the human body decaying one cell at a time, day by day.

Ten minutes, twenty minutes, an hour later, she still hadn't forgotten his visit.

SHE CLOSED her mother's door quietly, as if any noise, however slight, might disturb her.

Outside, the worst happened: snow changed to heavy sleet. Icy pellets, identical in size to coarse sand, poured from sky to roof as if from a dump truck loaded with twenty tons of the stuff. They scoured the shingles, hissed down the drainpipes, and overflowed the gutters, cascaded from eaves and overhangs into great piles. Atop the eight-inch drifts already on the ground, even an additional two inches of sleet would make shoveling by hand difficult, if not impossible. Whenever this had happened in the past it always froze rock-hard afterwards, trapping them for days.

No one else would be coming tonight, nor tomorrow. No one to comfort or assist them, no one to take Karena away. Felice knew she had to protect her daughter from the smell now seeping through the house. Even if she could have managed the dead weight, Felice couldn't bear to put Karena out into the storm. Opening the bedroom window, then closing the door on her mother was the only option she had.

Risa waited nervously in the hall, wearing her mask.

"Grandma?" she asked.

Felice smiled a smile that wasn't one. "She's peaceful now."

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"She's dead?"

"Yes."

Felice wasn't certain what reaction she should expect from Risa — tears, anger, accusations, disbelief. Instead, her daughter bobbed her head numbly in acceptance, turned and climbed the stairs to her room.

"Risa?"

"I'm okay."

Felice knew for a fact that she wasn't, Risa's fatalistic attitude upsetting her more than the blame for which she had braced.

It's okay. I'm going to die. You're going to die. We're all going to die, her daughter's eyes said.

She had to do something. She had to turn this around immediately.

She scrubbed herself raw in a hot shower, put on fresh clothes, then found a second mask in the furnace closet. Food for Risa came next. Scrounging in the refrigerator, she considered making her daughter's favorite soup, French onion, but ultimately decided on a warming, yet nondescript vegetable instead. If Risa ate French onion now, she would hate it forever, always reminded of her grandmother's death when it crossed her lips. She baked biscuits to go with the soup, slathered them in butter and jam and placed everything on a tray.

Risa's room was terrifyingly neat. She'd picked up everything off of her floor and thrown away the trash, changed her bed linens, arranged stuffed animals, slipped papers and odds and ends into drawers, stacked and sorted books into two piles, those belonging to the public library and her school. Most frightening of all was the clothes basket on the floor next to her dresser. Not only had she swept every piece of dirty clothing into the basket, she'd lined it with a thirty-gallon trash bag.

Felice's throat tightened. That a twelve-year-old would think of this, prepare like this, undid her.

"Are you okay, Mom?" Risa asked from the bed where she sat stiffly upright.

"Sure," she said. She placed the tray across her daughter's lap. "I brought you some soup."

"I don't want to eat."

"I think you should. Scoot over. I'll sit next to you and we'll watch some TV."

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Risa gave her control of the remote. She flipped through the channels, finding more than half had gone off the air. With the exception of a few news networks, snowy static replaced any channel or program requiring live or recently recorded content. Eventually she found a cheesy romance flick on a station that appeared to be computer automated rather than manned by living persons, and made no mention of the plague.

"I'm scared for you, Mom," Risa surprised her by saying forty minutes into the movie. "I don't want you to be all alone."

"Honey, you're not going to die. You're not even showing symptoms. Even if you got it, I know you'd survive."

"How do you know? Grandma died so quick."

"Grandma was older. This flu strikes older people the hardest. Older people and the very young. Now, I know you're not eligible for social security, are you?"

Risa giggled.

"And you're not a little girl anymore. You're almost thirteen."

"Tomorrow," Risa said with evident pride.

Oh, God. Her birthday's tomorrow. The special birthday.

"That's right. Tomorrow. And I have something special planned."

She had no such thing. With all that had happened, she'd forgotten. It seemed ghoulish to even think of celebrating, but kids had a different reality from adults.

Risa choked softly and suddenly rubbed her neck.

"What is it? Did you swallow something the wrong way?"

"My throat hurts," Risa said.

She vomited the soup and biscuits within the hour. By midnight she had a fever. Karena hadn't lived long enough to use much of the prescription meds, so Felice, hoping it might help if she was aggressive from the start, gave Risa a double dose. She got on the phone with 911 again, which this time didn't even answer, let alone put her on hold. Children's grape-flavored expectorant initially quieted the cough Risa developed around two-thirty in the morning, but less than thirty minutes later it was back, and Felice heard it working its way down into her bronchial tubes and finally her lungs.

I will not lose her. I won't, Felice promised herself over and over

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through the night, while she phoned Trina, the health department, ambulance companies, the pharmacy at the megacenter, every doctor in their meager rural phone book, seeking help or even advice. Yes, it was the middle of the night, but given the times, she expected at least one phone to be answered by a live person.

At dawn, the sun rose shrouded behind weather dark as a funeral veil. Fifteen hours and still the sleet continued, entombing them in a foot-and-a-half of solid ice. Piles topping twice that height lay in front of the windows and doors. Almost no light reached the ground. Instinctively, Felice glanced toward the drive, but couldn't see it through the gloom, anticipating, steeling herself for the fight she knew lay ahead. She had no hope.

Karena had struggled to breathe, Risa didn't. Karena's soul, her person had wrestled with the confines of a body that sought to smother her, wanting out, wanting freedom. Risa's did not. Her figure lay limp beneath the covers, hair slick with perspiration, lips blue from lack of oxygen. She choked on every breath, no longer having the energy to cough. The only movement came when she clawed ineffectually at her chest. A bloody, wadded tissue fell from her fingers.

"Happy Birthday, sleepyhead," Felice said.

Risa's eyelids, pained slits, worked to open all the way.

"Hi."

Felice carried a zippered plastic bag, printed with mod pink and orange flowers.

Risa saw the pouch.

"What's that?"

"A present for someone who's all grown up."

Makeup was all Risa had talked about this last year, when she would be allowed to wear it. Since the age of ten, she'd requested foundation to cover her birthmark, plus the mascara and lip gloss she swore — with a straight face — that the other girls wore.

Felice unzipped the pouch, removed astringent towelettes, a bottle of moisturizer, and another of foundation. All were hers, but they'd work well enough to make her daughter happy now, when time was so precious.

"Shall I give you a makeover?"

"Yes, please."

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Felice hated putting anything on those pale yet perfect cheeks. Her daughter's cryptic beauty needed no enhancement. Like most girls her age, however, she equated artifice with sophistication, and the drive for sophistication was every thirteen-year-old's secret aspiration.

Covertly wiping away blood and spittle from the corners of her daughter's mouth, Felice dotted beige liquid on forehead, chin, nose, and —

"Not the birthmark, Mommy."

"Are you sure?"

At that moment a bead of sweat rolled into Felice's right eye from her browline. Something that felt like a lead butterfly contorted, then drowned in her lungs. Dizziness rocked her from side to side. She couldn't suppress a hacking cough that labored to clear her throat of mucus that quivered and unexpectedly blocked her airway.

"I'm sure," Risa said. "He has to know I love it."

"He?"

If Risa answered, Felice didn't hear it. She put a hand to her temple, instinctively trying to squelch the throbbing that began there.

No. Please not yet. I have to help my baby.

She fumbled through the rest of the makeover, worried that the weakness infecting her so suddenly would result in a heavy-handed job too close to makeup on a corpse.

When she held the mirror up to her child's face, however, something glorious happened. Her daughter's color came back, her eyes brightened, and she laughed, that unaffected music that was uniquely Risa. For just a moment, Felice glimpsed the joyful adult her daughter was meant to be.

"It's been so long since I heard you laugh like that," Felice said.

"Thanks, Mom. I'm gorgeous."

"Yes, you are," she said, and passed out.

He was bent over her daughter when Felice woke. The ends of his long, black hair tickled Risa's throat. His fingers lovingly caressed the side of her chin, still baby soft.

"No," Felice cried. "You can't have her. She's mine. She belongs in *this* world."

"In my world, now," he said. "She's thirteen. That was our agreement."

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He lowered those exquisite lips to Risa's cheek, the one with the mark laid on her since birth. Odd, why had she never noticed it before? Her birthmark took the shape of a partial kiss. The instant lips met cheek, the kiss completed itself, then disappeared into Risa's face.

She opened her eyes.

"Daddy!" she whispered.

"I'm here, little dove."

"I'm afraid. I can't breathe anymore."

"I know," he said. "Time to come home with me."

"No, please," Felice said. "I love her so much. I need her."

For the first time she found the strength of will to look up into his eyes.

At once she knew everything, and everything was lost.

"Wake up, Felice. It's time to stop dreaming your human dreams."

"You took her," Felice accused, unable to fight the weight of eyelids that no longer responded.

"I didn't make you choose the place where sickness would be the worst."

"You're Death," she said.

"And you are The Moment of Joy Before," he told her. "It's time to stop pretending. To see with your real eyes again, so thousands need not suffer each day you forget."

But hadn't she suffered, too?

"I've missed you, my love. I need you. Our daughter needs you."

No. No one needed her. She was all alone now in the cabin in Cherry Lick.

"Wake!" he ordered.

Felice got up. She sat up through her cooling skin, through her face and those dead eyelids, shrugging off hideously rigid muscle and disgusting, congealing flesh.

He laid the fingers of one hand against her face and moved her so she was forced to meet his eyes.

They were kind. They hungered. She knew the man who lived within them.

"I am Eternity. I am Love. I am your Last Dream," he said, "Come to me."

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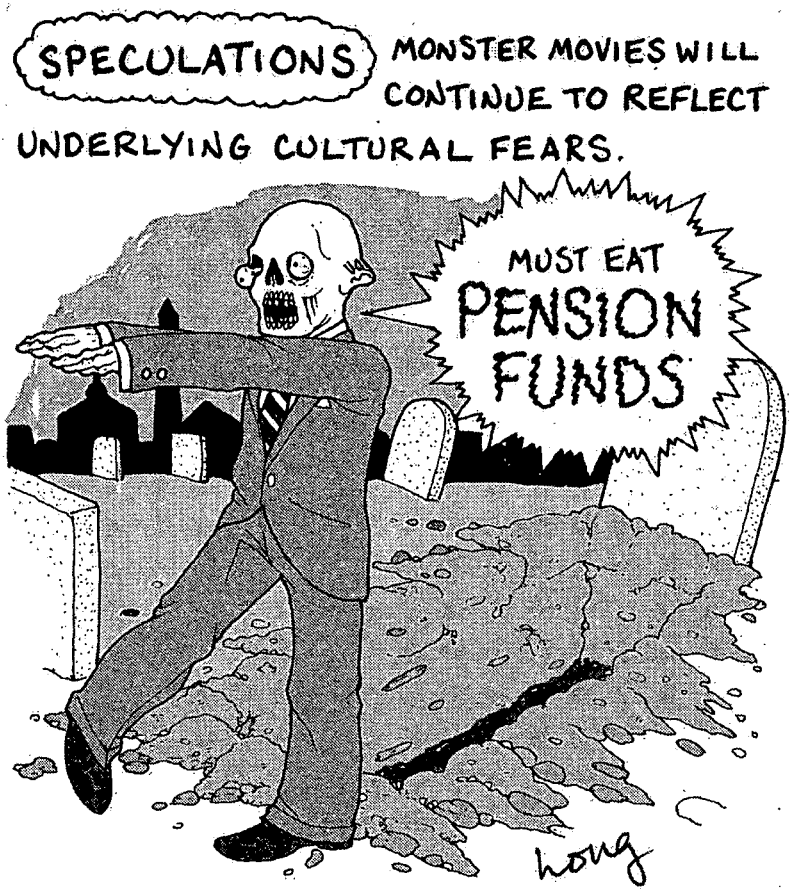
On the other side of the door, the sun broke free of its black veil, just in time to set. Sleet became snow once again. Slanted, late daylight transmuted snowflakes from ice white to gold, sunlight given mass that soothed her fevered cheeks.

She took his hand.



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CURIOSITIES

HOW TO WRITE "SCIENTIFIC" FICTION, BY HUGO GERNSBACK (1930)

"SCIENTIFIC detection of crime offers writers the greatest opportunity and most fertile field since the detective first appeared in fiction," Hugo Gernsback wrote in *The Writer's 1930 Year Book & Market Guide*. The year before, he'd lost control of *Amazing Stories*, wherein he'd effectively created the genre he called "scientifiction." Now he was teaching aspirant hacks to write for his newest project, *Scientific Detection Magazine*.

Did he have advice to offer! "Although good characterization helps a story," Gernsback wrote, "better none than poor ones." He demanded the science be accurate, and described a story where a criminal becomes invisible by painting himself with nonreflective paint. Its weakness? The author forgot about shadows. "*Don't* look through your old manuscripts and tack scientific endings to them," he counseled. "*Don't* drag in television. It is worked to death and there are so many other better appliances you can use."

This hectoring mixture of shrewdness and bosh is very similar to the manner in which Gernsback urged genre sf into being. And, indeed, the argument can be made that he anticipated today's forensic detection craze epitomized by the TV show *CSI* and the fiction of Patricia Cornwell. In any event, Gernsback clearly thought he had another winner. "With the advancement of science, the *criminal-in-fact* is turning scientific as well as the *criminal-in-fiction*. Therefore we prophesy that Scientific Detective fiction will supersede all other types," he trumpeted.

Alas, this time Gernsback turned out to be a false prophet. *Scientific Detection Magazine* lasted only ten issues.

—Michael Swanwick

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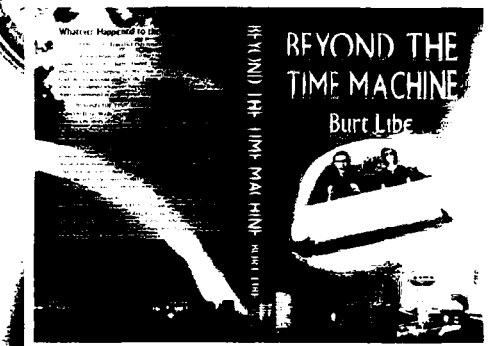

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